Chapter 4 California Environmental Quality Act Evaluation

4.1 Overview

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines requires that the CEQA Lead Agency provide a statement of objectives for a proposed project. As discussed in Section 1.3, Project Purpose and Need, the purpose of the MCP project is to provide a transportation facility that would effectively and efficiently accommodate regional west-east movement of people and goods between and through the Cities of Perris and San Jacinto. More specifically, the selected alternative would:

- Provide increased capacity to support the forecast travel demand for the 2040 design year;
- Provide a limited access facility;
- Provide roadway geometrics to meet state highway design standards;
- Accommodate Surface Transportation Assistance Act (STAA) National Network trucks;[1] and
- Provide a facility that is compatible with a future multimodal transportation system.

4.2 Determining Significance Under CEQA

Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required for a proposed project. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision to prepare an EIS is made, it is the magnitude of the impact that is evaluated, and no judgment of its significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in an EIS. However, such a determination is required by CEQA.

The CEQA Guidelines define a significant effect as ". . . a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected

[1] These are larger trucks that are permitted on the federal interstate system and the non-interstate federal-aid primary system.

by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An economic or social change by itself will not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant" (CEQA Guidelines, Section 15382).

The Guidelines further note "An ironclad definition of significant effect is not possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area" (CEQA Guidelines, Section 15064(2)(b)).

Per Section 15064.7 of the CEQA Guidelines, thresholds of significance are identifiable quantitative, qualitative, or performance levels of a particular environmental effect, noncompliance with which means the effect will normally be determined to be significant by the responsible public agency and compliance with which means the effect normally will be determined to be less than significant.

4.3 CEQA Environmental Checklist

The CEQA Environmental Checklist form in Appendix A, CEQA Environmental Checklist, of this EIR/EIS identifies physical, biological, social, and economic factors that might be affected by the MCP project. As shown on that checklist, the significance of impacts under CEQA are: potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. The following references provide additional detailed discussions regarding the assessment of the significance of project impacts under CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations (CCR), Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code (PRC), Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

CEQA requires that environmental documents determine and document the level of significance of project impacts. The thresholds of significance used to determine the significance of the environmental effects of the MCP project under CEQA are based on the questions in the CEQA Environmental Checklist form in Appendix A in this EIR/EIS. Those questions have been reworded as statements indicating what project effects would be significant under CEQA. Discussion of the assessment and determination of the significance of the potential impacts of the MCP project under

CEQA is provided in the following sections alphabetically by environmental topic as listed in the environmental checklist form. The discussions for each environmental topic are based on the data and analyses provided in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures, and the technical studies prepared for the MCP project.

This chapter describes the effects of the MCP preferred alternative (Alternative 9 Modified with the San Jacinto River Bridge Design Variation [SJRB DV]); avoidance, minimization, and mitigation measures to address those effects if needed; and the level of significance of those impacts under CEQA. The preferred alternative is the "project" as defined in Section 15378 of the CEQA Guidelines. For each environmental parameter, a summary of the effects of the level of significance of those impacts is also provided.

4.4 Discussion of CEQA Checklist Responses

I. AESTHETICS: The construction and operation of the MCP project would result in significant effects related to aesthetics if they:

a) Have a substantial adverse effect on a scenic vista

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

c) Substantially degrade the existing visual character or quality of the site and its surroundings

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

The information and analyses in this section are based on the *Visual Impact Assessment* and Section 3.7, Visual/Aesthetics. Section 3.7 describes the existing visual setting and resources in the MCP study area, the potential short- and long-term impacts of the MCP project related to visual resources, and avoidance, minimization, and mitigation measures to address the adverse visual impacts of the project.

Existing Conditions

As described in Section 3.7, there is a wide range of man-made and natural features in the MCP study area including the cities of San Jacinto and Perris; the San Jacinto and Lakeview Mountains; the Bernasconi and McCanna Hills; and the San Jacinto River. The MCP study area includes a wide range of rural and suburban/urban land uses including vacant land, agriculture, recreation, residential, commercial, industrial, institutional, and transportation uses. Some rural and undeveloped parts of the MCP study area include parcels which are either currently being developed in suburban/urban uses or are planned or proposed for those types of uses. Viewers in the MCP study area include residents, motorists, pedestrians, and bicyclists.

There are no Officially Designated State Scenic Highways or any Eligible State Scenic Highways-Not Officially Designated in the MCP study area. The nearest Officially Designated State Scenic Highway is the segment of SR-74 from the western boundary of the San Bernardino National Forest between SR-79 and SR-243 to Route 111 in Palm Desert. The nearest Eligible State Scenic Highway-Not Officially Designated in the MCP study area is SR-74 from the Orange County boundary to SR-79 (http://www.dot.ca.gov/hq/LandArch/scenic_highways/, accessed October 29, 2014).

Potentially Significant Impact (a, b, c, and d)

As discussed in detail in Section 3.7, the MCP project would result in short-term adverse visual impacts during construction as a result of views of construction areas, staging areas, grading, and construction activities. These impacts would be temporary and would cease at the completion of construction. These impacts would be substantially mitigated, to below a level of significance under CEQA, based on implementation of Measure VIS-1 and VIS-2 in Section 3.7, which requires the Construction Contractor to place construction and staging areas within the disturbance footprint and properly locate and direct lighting within the construction area to minimize light shining off site during those nighttime construction activities.

As discussed in detail in Section 3.7, the MCP project would result in long-term adverse visual impacts as a result of the permanent alteration of the visual environment by the new highway and associated bridges, interchange structures, retaining walls, and sound walls. The visual impacts of the MCP project will include changing the visual character of many areas, particularly areas with rural residential, agricultural, and recreation uses, and blocking views of existing viewer groups in other locations. The MCP project would result in adverse impacts on scenic vistas, would substantially damage scenic resources, would substantially degrade the existing visual character and quality in the MCP study area.

The MCP project would create new sources of substantial light and glare. Light and glare would increase as a result of safety lighting along the MCP mainline, ramps, and interchanges in those areas that are currently undeveloped, agricultural, or rural in character. Specifically, the MCP project would increase light and glare in the rural/ agricultural areas between the McCanna Hills and SR-79. In addition, the MCP area would experience an increase in lighting from nighttime traffic along the facility. Glare from headlights would be visible from land uses directly adjacent to the MCP facility. Glare from nighttime traffic would also contribute to a reduction in darkness of the night sky in the MCP study area. As a result, the MCP project and their design variations would result in significant adverse visual and aesthetic impacts.

Measures VIS-3 through VIS-7 would reduce the adverse visual and aesthetic impacts of the MCP project based on the preparation and implementation of the *MCP Corridor Master Plan* and the *MCP Landscape Plan,* which together will address the design of aesthetic structural, hardscape, landscape, and lighting features included in the MCP project. However, even with the implementation of those measures, the long-term project visual and aesthetic impacts cannot be reduced to below a level of

significance under CEQA. This is because the MCP project will alter the existing scenic resources to an extent where the project landscape plans, the aesthetic enhancements to sound walls, and the additional visually pleasing hardscape required in Measures VIS-3 through VIS-7 would not be sufficient to reduce the overall visual impact of the MCP project to below a level of significance under CEQA. As a result, the MCP project would result in significant unavoidable adverse impacts under CEQA after mitigation to scenic vistas, scenic resources, existing visual character, and the quality of the project area, including the addition of new sources of light and glare.

Because it has not yet been determined if the MCP facility will be a state highway, it has not been evaluated for potential eligibility for State Scenic Highway designation. As described earlier, there are no Officially Designated State Scenic Highways or any Eligible State Scenic Highways-Not Officially Designated in the MCP study area. Therefore, the MCP Build Alternatives will not result in impacts on Officially Designated State Scenic Highways or Eligible State Scenic Highways-Not Officially Designated in the MCP study area.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The short-term adverse visual effects of the preferred alternative described above would be substantially mitigated, to below a level of significance under CEQA, based on implementation of Measures VIS-1 and VIS-2 in Section 3.7, Visual/ Aesthetics. Those measures would limit construction activities and staging areas to within the project disturbance limits and fugitive light outside the project disturbance limits.
- Measures VIS-3 through VIS-7 would reduce the long-term adverse visual, aesthetic, light, and glare impacts of the preferred alternative described above based on implementation of an *MCP Corridor Master Plan, MCP Landscape Plan*, and a facility lighting plan including detailed hardscape and landscape features; and avoiding the removal of mature trees as noted on the project plans. However, even with the implementation of these measures, the long-term project visual and aesthetic impacts cannot be reduced to below a level of significance under CEQA. As a result, the MCP project would result in significant unavoidable adverse impacts under CEQA after mitigation to scenic vistas, scenic resources, existing visual character, and the quality of the project area, including the addition of new sources of light and glare.

- The MCP project will not result in impacts on Officially Designated State Scenic Highways or Eligible State Scenic Highways-Not Officially Designated in the MCP study area. No mitigation is required.

II. AGRICULTURE AND FOREST RESOURCES: The construction and operation of the MCP project would result in significant effects related to agriculture and forest resources if they:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use

b) Conflict with:

i) existing zoning for agricultural use or

ii) a Williamson Act contract

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))

d) Result in the loss of forest land or conversion of forest land to non-forest use

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use

The information and analyses in this section are based on the *Community Impact Assessment* and Sections 3.3, Farmlands/Timberlands, and 3.17, Plant Communities. Section 3.3 describes the existing and designated farmlands and agricultural resources in the MCP study area, the potential short- and long-term impacts of the MCP project related to farmland and agricultural resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to agricultural resources.

Existing Conditions

As shown on Figure 3.3-1 and as discussed in Section 3.3, the MCP study area includes designated Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Grazing Lands. In addition, there are two Williamson Act Preserves in the MCP study area. The General Plans of Riverside County (County) and the Cities of Perris and San Jacinto all identify specific areas designated for agriculture within their jurisdictions. However, those General Plans acknowledge that continuing development in this part of the County will result in further conversion of agricultural uses to nonagricultural uses.

Potentially Significant Impact (II. a)

As shown in Table 3.3.C in Section 3.3, the MCP project will result in the permanent conversion of designated Farmlands to transportation uses. There are no measures that can replace the lost agricultural land because the affected designated Farmlands cannot be replaced in-kind. The City of San Jacinto General Plan Final EIR (April 2006) determined that the viability of agriculture in the City in the longer term was limited due to land values, water costs, labor costs, urbanization, competition, and environmental regulations. In addition, development of residential and other uses adjacent to agricultural land can increase pressure on the remaining farmland and agricultural operations on that farmland. For example, farmers can be required to control nuisances, such as dust, odors, noise, insects, and aerial application of pesticides, thus incurring additional operating costs. The City's General Plan Final EIR does not include any mitigation measures requiring acquisition of agricultural conservation easements on off-site properties, or payment of "in-lieu" fees to fund such acquisitions. The General Plan includes Measure AQ-1 which requires provision of buffers between new development and redevelopment projects to maintain setbacks and buffers such as roads, topographic features, and open space, to prevent incompatibilities between agricultural and non-agricultural land uses during the development of new projects. However, that measure does not address the conversion of agricultural land to nonagricultural uses. The San Jacinto General Plan Final EIR recognizes that impacts to farmlands resulting from implementation of the General Plan would be significant and unavoidable after mitigation. As a result, the impacts of the MCP project related to the permanent conversion of designated Farmlands to nonagricultural uses are adverse, significant, and unavoidable.

Less than Significant with Mitigation (II.b.i and II.b.ii)

As discussed above, the MCP project will result in the permanent conversion of designated Farmland to transportation uses. In addition, the MCP project will result in permanent conversion of agricultural lands in Williamson Act Preserves to transportation uses. As a result, areas that are designated in local general plans and zoning codes for agricultural uses would conflict with those areas that would be permanently used for transportation by the MCP project.

As discussed in Section 3.3, the MCP project has been aligned to minimize impacts to agricultural lands (e.g., routing the alignments along the edges of agricultural parcels rather than dividing them). In addition, potential indirect impacts to farmlands are minimized through the compliance of local agencies with land use approval authority (County of Riverside, City of Perris, and City of San Jacinto) with the policies

contained in their respective General Plans. The following policies are from the Riverside County General Plan:

- **LU 16.1:** Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.
- **LU 16.2:** Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses (AI 3).
- **LU 16.4:** Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.
- **LU 16.5:** Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.
- **LU 16.7:** Adhere to Riverside County's Right-to-Farm Ordinance.
- **LU 16.8:** Support and participate in ongoing public education programs by organizations such as the County Agricultural Commissioner's Office, the University of California Cooperative Extension, the Farm Bureau, and industry organizations to help the public better understand the importance of the agricultural industry.
- **LU 16.11:** The County shall pursue the creation of new incentive programs, such as tax credits, that encourage the continued viability of agricultural activities (AI 1).

Measure LU-5, in Section 3.1, Land Use, requires RCTC to request the County of Riverside and the Cities of Perris and San Jacinto to amend their General Plans to reflect the final adopted MCP alignment and to change areas within the permanent right of way for the MCP facility previously designated by those General Plans for agricultural uses to transportation uses. Although RCTC cannot require these local jurisdictions to revise their General Plans, it is expected that these jurisdictions would amend their General Plans to reflect these changes in land uses as part of their ongoing General Plan updates/revisions. As a result, although the General Plan updates may not be done immediately, when they are done by each jurisdiction, the adopted transportation use (MCP project) would be consistent with the uses shown for those areas in those General Plans. Similarly, local jurisdictions update their zoning codes to be consistent with their general plans so when the general plans are updated, the zoning codes would also be updated. Therefore, as the general plans and

zoning codes are updated by County of Riverside and the Cities of Perris and San Jacinto, the transportation uses on the ground (MCP project) would no longer conflict with land use designations in these local general plans and zoning codes.

Measure AG-3, in Section 3.3, requires RCTC to comply with the notifications of Section 51291 of the Williamson Act for acquisition of agricultural preserves for public improvements. By filing these applicable notifications with the California State Department of Conservation and by making the required filings under Section 51292 of the Williamson Act, the conflicts of the MCP project use of land under Williamson Act contracts would be eliminated.

In summary, Measures LU-5 and AG-4 would reduce the project conflicts with general plans, zoning codes, and Williamson Act contracts to below a level of significance under CEQA.

Less than Significant with Mitigation (II.e)

As discussed in Section 3.3, the alignments of the MCP project cross areas currently devoted to a variety of agricultural uses, including grazing, dryland and irrigated farming, orchards, and dairies. As shown in Table 3.3.C in Section 3.3, the MCP project will result in permanent conversion of designated Farmlands to transportation uses. The Build Alternatives and their design variations do not include any design features that would result in the conversion of additional land from agricultural to nonagricultural uses. The MCP project could result in adverse impacts related to access to agricultural parcels during project construction and operations; those impacts will be substantially reduced, to below a level of significance under CEQA, based on implementation of Measures AG-1, AG-2, and AG-3 in Section 3.3. In summary, the MCP project would not result in adverse changes in the existing environment after mitigation which, due to their location or nature, could result in the conversion of designated Farmlands (other than those lands acquired for the MCP project) to nonagricultural uses.

No Impact (II.c and II.d)

As described in Section 3.17 and as shown in Table 3.17.A, the vegetation communities in the biological survey area (BSA) for the MCP project do not include any forest land or timberland. As a result, the MCP project would not affect forest land or timberland, would not conflict with zoning or require rezoning of land zoned Timberland Production, and would not result in the loss of forest land or timberland

to non-forest land and non-timberland uses. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- There is no mitigation that would reduce or avoid the permanent conversion of designated farm land to a transportation use. Therefore, the MCP project would result in an unavoidable significant adverse impact related to the permanent loss of designated farmland.
- The effects of the MCP project on Williamson Act contract lands will be mitigated to below a level of significance based on compliance with agency noticing requirements as detailed in Measure AG-4.
- The effects of the MCP project on short- and long-term farm operations related to disruptions to access, equipment, and livestock crossings will be substantially reduced, to below a level of significance based on notifications to agricultural property owners and coordination with those owners on the provision of temporary and permanent access for equipment and livestock.
- The MCP project will not impact forest land or timberland. No mitigation is required.

III. AIR QUALITY: The construction and operation of the MCP project would result in significant effects related to air quality if they:

a) Conflict with or obstruct implementation of the applicable air quality plan

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)

d) Expose sensitive receptors to substantial pollutant concentrations

e) Create objectionable odors affecting a substantial number of people

The information and analyses in this section are based on the *Air Quality Analysis* (March 2012), Section 3.14, Air Quality, and the Supplemental Technical Memorandum on Air Quality, Health Risk, and Greenhouse Gas Analyses (2014). The information in this section is also summarized from the "Recirculated Sections of Chapter 4.0 (III, Air Quality; VI, Greenhouse Gases; 4.5, Climate Changes; and Table 4.10" (January 2014). Please refer to Chapter 5, Comments and Coordination, regarding the public circulation of the "Recirculated Sections of Chapter 4.0."

Section 3.14 describes the existing air quality in the MCP study area, the potential short- and long-term air quality impacts of the MCP project, and avoidance, minimization, and mitigation measures to address the adverse air quality impacts of the MCP project.

Existing Conditions

As discussed in Section 3.14, historical air quality data show that carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) levels in the MCP study area and the general vicinity do not exceed either the state or federal ambient air quality standards (AAQS) for those criteria pollutants. The AAQS for the remaining criteria pollutants (ozone and particulates) are exceeded in the MCP study area. Existing sensitive land uses for air pollutants in the MCP study area include residences, schools, playgrounds, child care centers, hospitals, and other similar land uses.

The checklist questions listed above were used as the thresholds for assessing whether the MCP project would result in short- and/or long-term adverse direct, indirect, or cumulative air quality impacts for CEQA purposes. In addition, when assessing

temporary impacts, the South Coast Air Quality Management District (SCAQMD) thresholds, although not adopted by RCTC, were considered to allow for comparison of the impacts among the MCP project. The federal AAQS for CO and particulate matter (PM) were also considered in this analysis.

No Impact (III.a)

As discussed in Section 3.14, the MCP project would not conflict with or obstruct implementation of any applicable air quality plan. Both the design concept and the scope of the MCP project are consistent with the project description in the 2012 Regional Transportation Plan (RTP) and the 2013 Federal Transportation Improvement Program (FTIP) and the opening year traffic assumptions in the Southern California Association of Governments (SCAG) regional emissions analysis of both the 2012 RTP and the 2013 FTIP. Therefore, the MCP project would not result in impacts related to implementation of any applicable air quality plan. No avoidance, minimization, or mitigation measures are required.

Significant and Unavoidable (III.b)

Short-Term Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by site preparation, excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, oxides of nitrogen (NO_x), volatile organic compounds (VOCs), directly-emitted particulate matter (particulate matter less than 2.5 microns in size [$PM_{2.5}$] and less than 10 microns in size [PM_{10}]), and toxic air contaminants such as diesel exhaust PM.

The proposed construction schedule for all improvements is approximately 48 months, and construction is anticipated to be completed by 2020. The construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) Road Construction Emissions Model, Version 7.1.4, a model approved for use within the South Coast Air Basin by the SCAQMD. Construction-related emissions are presented in Table 4.III.A. The construction emissions listed in Table 3.14.W in the Recirculated Draft EIR/ Supplemental Draft EIS were calculated using Version 6.3.2 of the SMAQMD's Road Construction Emissions Model. Therefore, the emissions listed in Tables 3.14.W and 4.III.A do not match. As shown in Table 4.III.A, the NO_X and PM_{10} emissions during construction would exceed the SCAQMD's thresholds.

Table 4.III.A Maximum Project Construction Emissions before Mitigation (lbs/day)

Project Phases	ROGs	CO	NO_X	Total PM_{10}	Total $PM_{2.5}$
Grubbing/Land Clearing	16.9	87.8	173.0	157.6	38.0
Grading/Excavation	34.9	172.5	396.9	167.8	46.9
Drainage/Utilities/Sub-Grade	16.4	92.5	147.1	157.9	38.3
Paving	8.3	67.9	67.6	3.7	3.3
Maximum (lbs/day)	34.9	172.5	396.9	167.8	46.9
SCAQMD Thresholds (lbs/day)	**75**	**550**	**100**	**150**	**55**

Source: *LSA Associates, Inc.* (January 2014).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROGs = reactive organic gases
SCAQMD = South Coast Air Quality Management District

These short-term impacts during construction of the MCP project would be adverse and potentially significant.

The total PM_{10} and $PM_{2.5}$ emissions listed in Table 4.III.A include the reductions in fugitive dust expected based on implementation of the standard SCAQMD construction measures. Implementing Measure AQ-1 would further reduce the fugitive dust emissions. By restricting construction activities and requiring that newer construction equipment be used on site, Measure AQ-2 would reduce the stationary and mobile source emissions to below those listed in Table 4.III.A. Under Measure AQ-2, all off-road construction equipment with a rated horsepower (hp) exceeding 75 would be required to meet or exceed the United States Environmental Protection Agency's (EPA's) Tier 3 off-road diesel engine standards. Because there are no Tier 3 standards for equipment under 75 hp, such equipment would be required to meet the Tier 2 standards. Table 4.III.B lists the construction emissions after implementing Mitigation Measures AQ-1 and AQ-2. At this time, it is unknown where electricity from power poles can be used to replace diesel generators or when solar-powered message signs can be used. Therefore, the emissions listed in Table 4.III.B do not take credit for these requirements of Mitigation Measure AQ-2. The SMAQMD's Road Construction Emission Model assumes that all off-road equipment will meet EPA's Tier 2 standards by the projected start of construction in 2016. The EPA off-road diesel standard for CO emissions is the same for Tier 2 and Tier 3 equipment.

Table 4.III.B Maximum Project Construction Emissions after Mitigation (lbs/day)

Project Phases	ROGs	CO	NO_X	Total PM_{10}	Total $PM_{2.5}$
Grubbing/Land Clearing	5.7	87.8	101.8	155.4	36.1
Grading/Excavation	11.9	172.5	259.9	162.3	41.8
Drainage/Utilities/Sub-Grade	6.3	92.5	107.4	156.5	37.0
Paving	4.0	67.9	65.0	4.6	4.1
Maximum (lbs/day)	11.9	172.5	259.9	162.3	41.8
SCAQMD Thresholds (lbs/day)	**75**	**550**	**100**	**150**	**55**

Source: *LSA Associates, Inc.* (January 2014).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROGs = reactive organic gases
SCAQMD = South Coast Air Quality Management District

Therefore, the CO emissions in Tables 4.III.A and 4.III.B are the same. As shown in Table 4.III.B, the construction emissions would continue to exceed the SCAQMD's thresholds for NO_X and PM_{10}.

In addition to the estimated emissions from construction equipment, there would be emissions from the grading and hauling of imported borrow material to the MCP construction area. Using the heavy duty truck emission rates from EMFAC2011, the imported borrow volumes from Table 2.3.D of the Final EIR/EIS, an average truck capacity of 15 cubic yards, and a round trip haul distance of 20 miles (based on the potential borrow locations shown in Figure 2.3.5), the daily haul truck emissions were calculated for each of the Build Alternatives. The results of the haul truck trip emissions are listed in Table 4.III.C. When added to the emissions listed in Table 4.III.B, the haul trucks would contribute to the project's exceedance of the SCAQMD's thresholds for NO_X and PM_{10}. Therefore, the short-term construction emissions would result in a significant unavoidable impact after mitigation related to NO_X and PM_{10} emissions.

Table 4.III.C Haul Truck Trip Emissions (lbs/day)

Project Alternative	ROGs	CO	NO_X	Total PM_{10}	Total $PM_{2.5}$
Alternative 4 Mod	11.1	145.0	17.4	1.7	0.8
Alternative 5 Mod	9.4	122.7	14.7	1.5	0.7
Alternative 9 Mod	5.8	75.8	9.1	0.9	0.4
SCAQMD Thresholds (lbs/day)	**75**	**550**	**100**	**150**	**55**

Source: *LSA Associates, Inc.,* November 2014.
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NA = Not Applicable
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROGs = reactive organic gases
SCAQMD = South Coast Air Quality Management District

Long-Term Operational Emissions

As shown in Table 4.III.D, under the Baseline/Existing (2008) conditions, the change in regional traffic distribution during operation of the MCP project would result in a net decrease in emissions for all the criteria pollutants. However, as shown in Tables 4.III.E and 4.III.F for 2020 and 2040 conditions, respectively, the change in regional traffic distribution due to the construction of the MCP project would result in a net increase in emissions for all of the criteria pollutants. The change in the CO, reactive organic gases (ROG), and NO_X emissions would exceed the SCAQMD's significance thresholds. ROG and NO_X are precursors to ozone (O_3), a pollutant for which the South Coast Air Basin is currently in nonattainment for the federal and state standards. Therefore, although the SCAQMD has not set a significance threshold for O_3, the project could result in a significant O_3 impact. Because RCTC does not have legal authority to control on-road vehicle emissions, there are no mitigation measures by RCTC that can be implemented to reduce the emissions to below the SCAQMD significance thresholds. In addition, the SCAQMD's Regional Clean Air Incentives Program (RECLAIM) is aimed at offsetting emissions generated by new facilities, not on-road emissions. Therefore, the project's impact to long-term regional emissions would be significant and unavoidable.

Table 4.III.D 2008 Regional Vehicle Emissions (lbs/day)

Alternative	CO	ROG	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
No Build	465,705	25,676	143,299	558	6,878	4,641	57,051,890
Alternative 4 Modified	442,079	24,468	136,292	530	6,526	4,412	54,185,822
Change from No Build	-23,626	-1,208	-7,007	-27	-351	-229	-2,866,069
Alternative 5 Modified	441,100	24,404	136,049	529	6,511	4,401	54,045,450
Change from No Build	-24,605	-1,272	-7,250	-29	-367	-240	-3,006,440
Alternative 9 Modified	441,454	24,427	136,165	529	6,516	4,405	54,091,127
Change from No Build	-24,250	-1,249	-7,134	-29	-362	-236	-2,960,763
SCAQMD Significance Thresholds	**550**	**55**	**55**	**150**	**150**	**55**	**N/A**

Source: Iteris and LSA Associates, Inc. (May 2012).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_X = nitrogen oxides
N/A = Not Applicable
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases
SO_X = sulfur oxides

Table 4.III.E 2020 Regional Vehicle Emissions (lbs/day)

Alternative	CO	ROG	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
2008 Existing	465,705	25,676	143,299	558	6,878	4,641	57,051,890
2020 No Build	266,465	14,067	78,654	844	8,675	5634	87,631,280
Alternative 4 Modified	266,858	14,107	78,935	846	895	5647	87,885,919
Change from Existing	-198,847	-11,569	-64,364	288	1,818	1006	30,834,029
Change from No Build	393	40	280	2	20	13	254,639
Alternative 5 Modified	266,801	14,100	78,905	846	8,692	5645	87,853,255
Change from Existing	-198,904	-11,576	-64,397	288	1,815	1004	30,801,365
Change from No Build	336	34	248	2	17	11	221,975
Alternative 9 Modified	266,952	14,115	78,930	847	8,697	5649	87,906,784
Change from Existing	-198,753	-11,561	-64,368	289	1,819	1008	30,854,894
Change from No Build	487	48	276	3	22	15	275,504
SCAQMD Significance Thresholds	**550**	**55**	**55**	**150**	**150**	**55**	**N/A**

Source: Iteris and LSA Associates, Inc. (May 2012).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_X = nitrogen oxides
N/A = Not Applicable
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases
SO_X = sulfur oxides

Table 4.III.F 2040 Regional Vehicle Emissions (lbs/day)

Alternative	CO	ROG	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
2008 Existing	465,705	25,676	143,299	558	6,878	4,641	57,051,890
2040 No Build	201,123	11,003	52,130	1,196	11,582	7,272	125,539,130
Alternative 4 Modified	201,720	11,057	52,327	1,200	11,623	7,301	126,057,775
Change from Existing	-263,985	-14,619	-90,972	642	4,746	2,660	69,005,884
Change from No Build	597	54	197	5	42	29	518,645
Alternative 5 Modified	201,720	11,056	52,323	1,200	11,623	7,300	126,043,848
Change from Existing	-263,985	-14,620	-90,975	642	4,745	2,659	68,991,958
Change from No Build	598	53	194	4	41	27	504,719
Alternative 9 Modified	201,914	11,066	52,365	1,201	11,633	7,306	126,150,645
Change from Existing	-263,790	-14,610	-90,934	643	4,755	2,665	69,098,755
Change from No Build	792	63	235	6	51	34	611,515
SCAQMD Significance Thresholds	**550**	**55**	**55**	**150**	**150**	**55**	**N/A**

Source: Iteris and LSA Associates, Inc. (May 2012).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_X = nitrogen oxides
N/A = Not Applicable
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases
SO_X = sulfur oxides

4.4.1 Mitigation Measures

AQ-1 **Fugitive Dust Source Controls.** During all site preparation, grading, excavation, and construction, the Riverside County Transportation Commission (RCTC) will require the Construction Contractor to:

- Stabilize open storage piles and disturbed areas by covering them and/or applying water or chemical/organic dust palliative to the disturbed surfaces. This applies to inactive and active sites during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, phase grading operations, and operate water trucks for stabilization of surfaces under windy conditions.
- Limit vehicle speeds to 15 miles per hour (mph) within the project limits.
- Cover loads when hauling material to prevent spillage.
- Limit speed of earthmoving equipment to 10 mph within the project limits.

AQ-2 **Mobile and Stationary Source Controls.** During all site preparation, grading, excavation, and construction, the RCTC Resident Engineer will require the Construction Contractor to:

- Reduce unnecessary idling from heavy equipment by requiring that the construction grading plans include a requirement that work crews will shut off equipment when not in use.
- Use solar-powered, instead of diesel-powered, changeable message signs.
- Use electricity from power poles, rather than from generators, when electricity can be acquired from existing power poles in proximity to the construction areas.
- Maintain and tune engines per manufacturers' specifications to perform at United States Environmental Protection Agency (EPA) certification levels and verified standards applicable to retrofit technologies. The RCTC Resident Engineer will conduct periodic, unscheduled inspections to ensure that there is no unnecessary idling and that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturers' recommendations.
- Use new, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or state standards and commit to the best available emissions control technology. Use Tier 3, or higher, engines for construction equipment with a rated horsepower exceeding 75. Use Tier 2, or higher, engines for construction equipment with a rated horsepower of less than 75. If nonroad construction equipment that meets or exceeds Tier 2 or 3 engine standards is not available, the Construction Contractor will be required to use the best available emissions control technologies on all equipment.
- Use EPA-registered particulate traps and other controls to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Evaluation of Potential Alternatives to Reduce or Avoid Significant Unavoidable Adverse Air Quality Impacts of the MCP Project

As discussed above, the MCP project would result in significant unavoidable short-term adverse impacts during construction and long-term impacts during project operations. The following alternatives were considered to assess whether they would

meet the project objectives and also reduce or avoid the significant unavoidable adverse air quality effects of the MCP project.

No Build Alternatives 1A and 1B

No Build Alternatives 1A and 1B were evaluated in detail in the Recirculated Draft EIR/Supplemental Draft EIS. None of the improvements in the MCP project would be constructed under No Build Alternatives 1A and 1B. As a result, No Build Alternatives 1A and 1B would not result in the significant unavoidable short- and long-term air quality impacts that would occur under the MCP project. However, No Build Alternatives 1A and 1B would not meet the defined objectives for the project.

MCP Build Alternatives with a Longer Construction Period

As shown in Table 4.III.B, construction of the MCP project over a 4-year construction period would result in significant unavoidable short-term impacts related to PM_{10} and NO_X emissions after mitigation. Those short-term emissions could potentially be reduced to below the SCAQMD thresholds shown in Table 4.III.B if the construction period for the MCP project was extended to be longer than 4 years and focusing on reducing the amount of time specific construction activities generate PM_{10} and NOx emissions. Because the PM_{10} emissions during the different construction phases would exceed the SCAQMD thresholds by relatively small amounts as shown in Table 4.III.B, the total construction period would not need to be extended substantially to reduce the daily PM_{10} emissions to below the SCAQMD thresholds. However, the SCAQMD NO_X threshold would still be substantially exceeded during the project grading and excavation (259.9 pounds per day [lbs/day] compared to the SCAQMD threshold of 100 lbs/day). Under this approach, the total amount of construction-related emissions would be approximately the same as for the 4-year construction period, but spread over a much longer period of time. Therefore, although there would be a reduction in daily emissions, to below the SCAQMD thresholds, with a longer construction period, the total construction-related emissions would be the same, the cost of the project would likely increase, there would be no avoidance or reduction in long-term PM_{10} and NO_X emissions during operation of the MCP project, and the longer construction period could result in greater impacts on the surrounding communities including traffic and community disruption.

Less than Significant (III.c and III.d)

The MCP project would help to improve traffic flow and reduce congestion on road links in the project vicinity. The MCP study area is in an attainment area for the State CO standards and an attainment/maintenance area for the federal CO standards. Using

the Caltrans Transportation Project-Level Carbon Monoxide Protocol (Protocol), a screening level CO hot-spot analysis was conducted to determine whether the MCP project would result in any exceedances of the CO AAQS. It was determined that the MCP project would not result in any exceedance of the federal 1-hour or 8-hour CO standards. Therefore, the project effects related to CO emissions would be below a level of significance under CEQA. No avoidance, minimization, or mitigation measures would be required.

The Hot Spot analysis ($PM_{2.5}$ and PM_{10}) described in Section 3.14 indicates that the MCP project would not contribute to a PM hot spot that would cause or contribute to a violation of the federal PM_{10} or $PM_{2.5}$ standards. Therefore, the potential impacts during operation of the MCP project related to PM emissions would be less than significant under CEQA. No avoidance, minimization, or mitigation measures are required.

The Mobile Source Air Toxics (MSAT) analysis described in Section 3.14 indicates that the 2020 and 2040 MSAT emissions in the study area under the MCP project would be very similar to the MSAT emissions under the No Build Alternatives and much lower than existing conditions, largely due to improvements resulting from stricter EPA engine and fuel regulations. Therefore, the MCP project would result in less than significant impacts related to MSAT emissions under CEQA. No avoidance, minimization, or mitigation measures are required.

For pollutants without defined significance standards or air contaminants not covered by the standard criteria cited above, the definition of substantial pollutant concentrations varies. For toxic air contaminants (TAC), "substantial" indicates that the individual cancer risk exceeds a threshold considered to be a prudent risk-management level. If best-available control technology for toxics (T-BACT) has been applied, the individual cancer risk to the maximally exposed individual (MEI) must not exceed 10 in 1 million in order for an impact to be determined not to be significant.

The following limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard indices (HI) from project emissions of TACs have been established for the South Coast Air Basin:[1]

[1] South Coast Air Quality Management District. http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook (accessed October 23, 2014).

- **MICR and Cancer Burden.** MICR is the estimated probability of a potential MEI contracting cancer as a result of exposure to TACs over a period of 70 years for residential and 46 years for worker receptor locations. The MICR calculations include multipathway considerations when applicable. Cancer burden is the estimated increase in the occurrence of cancer cases in a population subject to an MICR of greater than or equal to one in one million (1.0×10^{-6}) resulting from exposure to TACs.

  The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs emitted from the project will not result in either of the following:

  - An increased MICR greater than 10 in 1 million (1.0×10^{-5}) at any receptor location (assumes the project will be constructed with T-BACT)
  - A cancer burden greater than 0.5

- **Chronic HI.** This is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multipathway considerations when applicable.

  The cumulative increase in total chronic HI for any target organ system due to total emissions from the project will not exceed 1.0 at any receptor location.

- **Acute HI.** This is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level.

The cumulative increase in total acute HI for any target organ system due to total emissions from the project will not exceed 1.0 at any receptor location.

A screening analysis to determine the short-term health risks associated with the on-site construction diesel vehicles was prepared for the MCP project. This analysis was performed using the SCREEN3 dispersion model, a single-source Gaussian plume model, which provides maximum ground-level concentrations for point, area, flare, and volume sources. The inhalation cancer risk and inhalation chronic risk were calculated using the peak daily exhaust emissions that would be generated during the grading/excavation phase of construction, the phase with the highest PM_{10} exhaust emissions. The results of the modeling, for distances of 85 to 335 feet (ft) from the construction equipment, are shown in Table 4.III.G. As shown, the cancer risk threshold of 10 in 1 million and the chronic risk threshold of 1.0 would not be exceeded. Therefore, the construction of the MCP project would not result in any adverse health risks to persons near the project, and no mitigation measure would be is required.

Table 4.III.G Results of Health Risk Assessment Modeling (Construction)

Distance from Construction Equipment in feet	Inhalation Cancer Risk No. in 1 Million	Inhalation Chronic Risk Factor
85	4.34	0.7605
105	4.27	0.747396
115	4.2	0.735228
135	4.06	0.71136
155	3.88	0.680004
165	3.7	0.648648
185	3.5	0.614016
205	3.37	0.590148
215	3.2	0.560196
235	3	0.5265
255	2.87	0.502164
265	2.79	0.488124
285	2.68	0.47034
305	2.57	0.451105
315	2.46	0.430888
335	2.34	0.410436

Source: *LSA Associates, Inc.* (January 2014).

A screening analysis to determine the long-term health risks associated with the on-road operational diesel vehicles on the MCP facility was also prepared for the MCP project. This analysis was performed using the SCREEN3 dispersion model, a single source Gaussian plume model, which provides maximum ground-level concentrations for point, area, flare, and volume sources. A complete summary of the health risk assessment is included in Section 5.3.2 of the *Air Quality Analysis*. The inhalation cancer risk and inhalation chronic risk were calculated using the peak average daily traffic (ADT) volumes for each of the MCP Build Alternatives. The results of the modeling are shown in Table 4.III.H. As shown, for a resident living within 65 ft of the roadway centerline, the cancer risk threshold of 10 in 1 million and the chronic risk threshold of 1 would not be exceeded by any of the MCP project. Therefore, the MCP project would not result in any long-term adverse health risks to persons near the MCP project, and no mitigation measures would be required.

In summary, the construction and operation of the MCP project would result in less than significant impacts related to diesel toxics emissions under CEQA. No avoidance, minimization, or mitigation measures are required.

Table 4.III.H Results of Health Risk Assessment Modeling (Operations)

Alternative	Peak Volume ADT	Maximum PM_{10} Concentrations		Inhalation Cancer Risk for Adults No. in 1 Million[1]	Inhalation Cancer Risk for Children No. in 1 Million[1]	Inhalation Chronic Risk Factor[1]
		($\mu g/m^3$)	($\mu g/m^3$)			
Existing	24,400	0.0041	0.00033	0.07	0.014	0.00007
No Build	79,000	0.0132	0.00106	0.24	0.046	0.00021
Alt 4 Mod	93,600	0.0252	0.00201	0.46	0.088	0.00040
Alt 5 Mod	93,400	0.0251	0.00201	0.46	0.088	0.00040
Alt 9 Mod	93,800	0.0252	0.00202	0.46	0.088	0.00040

Source: *Air Quality Analysis* (March 2012).

[1] All health risk levels reported are for individuals living 65 ft from the roadway centerline. Any person living further from the roadway centerline would experience lower health risk levels than shown in this table for persons living within 20 m (65 ft) from the roadway centerline.

ADT = average daily traffic
Alt = Alternative
ft = foot/feet
$\mu g/m^3$ = micrograms per cubic meter of air
m = meter
Mod = Modified
PM_{10} = particulate matter less than 10 microns in diameter

As discussed earlier in Section 4.III.b, the MCP project would result in significant impacts associated with construction and operational air emissions. However, because the MCP project has been modeled in the RTP/FTIP, the project's criteria pollutant emissions, including ozone precursors, have been accounted for in the State Implementation Plan (SIP). As discussed in Section 4.III.b and 4.III.c, the MCP project would not result in any exceedances of the CO or PM standards and the construction and operation of the MCP project would result in less than significant impacts related to diesel toxics emissions under CEQA. Therefore, the proposed project's cumulative air quality impacts would be less than significant.

The project site is in Riverside County, which is not among the counties listed as containing serpentine and ultramafic rock. Therefore, the impact from naturally occurring asbestos during construction of the MCP project would be minimal to none and, as a result, would be below a level of significance under CEQA. No avoidance, minimization, or mitigation measures are required.

Less than Significant (III.e)

As discussed in Section 3.14, during construction, particularly during asphalt paving and the operation of diesel equipment, short-term odors would be generated in the immediate vicinity of those activities. These odors would dissipate quickly, to below detectable levels, as the distance from the odor-generating activities increases. Because these odors would be short-term, limited to only certain activities, and would dissipate quickly, this would be a less than significant impact under CEQA during

construction of the MCP project. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The short-term air emissions during construction of the MCP project described above would be partially reduced based on implementation of Measures AQ-1 and AQ-2, which require implementation of fugitive dust control and mobile and stationary source controls during all project construction activities; AQ-3, which requires administrative controls including siting of construction equipment in the vicinity of sensitive receptors; AQ-4, which requires compliance with Caltrans Standard Specifications for Construction. AQ-5, which requires determining whether asbestos-containing materials are present and the implementation of appropriate methods to remove those materials; and AQ-6, which requires the construction contractor to use of locally made building materials if they are available in Riverside County and to reuse/recycle waste construction materials. However, even with implementation of Measures AQ-1 through AQ-6, the short-term construction emissions during construction of the MCP project cannot be reduced to below a level of significance.
- There is no mitigation to reduce the significant adverse air quality effects during operation of the MCP project to below a level of significance.
- The MCP project would not result in conflicts with or obstruction of implementation of any applicable air quality plan. No mitigation is required.
- Short-term odors would be generated during construction of the MCP project; those impacts would be limited to only certain activities and would dissipate quickly. Therefore, the MCP project would result in less than significant impacts related to odors during construction. No mitigation is required.

IV. BIOLOGICAL RESOURCES: The construction and operation of the MCP project would result in significant effects related to biological resources if they:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

f) Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP

The information and analyses in this section are based on the *Natural Environment Study*, the *Supplement to the Natural Environment Study*, and the following sections of the EIR/EIS:

- Section 3.17, Natural Communities
- Section 3.18, Wetlands
- Section 3.19, Plant Species
- Section 3.20, Animal Species
- Section 3.21, Threatened and Endangered Species
- Section 3.22, Invasive Species

These analyses are also based on the Mid County Parkway MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation, which is provided in Appendix T of this Final EIR/EIS. Appendix T also contains the Joint Project Review, which confirms that the MCP project complies with the requirements of the Western Riverside County MSHCP.

The existing biological resources in the BSA for the MCP project, the potential short- and long-term impacts of the MCP project related to biological resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project on biological resources are provided in Sections 3.17 through Section 3.22.

Existing Conditions

In addition to developed uses and areas used for agriculture, the BSA includes a number of habitats: lake/pond, Riversidean upland sage scrub, nonnative grassland, alkali grassland, marsh, riparian forest, and riparian scrub as discussed in detail in Section 3.17. The native habitats along the alignments of the MCP project are highly fragmented, with the exception of limited locations that have been identified as providing habitat connectivity and potential wildlife corridors.

There are water resources under the jurisdiction of the United States Army Corps of Engineers (USACE) and the California Department of Fish and Wildlife (CDFW) at a number of places along the MCP project alignments, as shown on Figures 3.18-1 and 3.18-2, respectively, and as discussed in detail in Section 3.18.

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) provides for the protection of plants and animals and their habitats throughout western Riverside County, including areas in the BSA for the MCP project. Plant species covered by the Western Riverside County MSHCP and found in the BSA are the San Jacinto Valley crownscale, smooth tarplant, Coulter's goldfields, and spreading navarretia, as discussed in Section 3.19. The BSA also includes suitable habitat for several special-status plant species. Animal species covered by the Western Riverside County MSHCP and special-status animals found in the BSA include burrowing owl, Los Angeles pocket mouse, and bat species, as discussed in detail in Section 3.20.

As discussed in detail in Section 3.21, eight threatened and endangered species were either found, or there is potentially suitable habitat for them, in the BSA. Those threatened and endangered species are:

- San Jacinto Valley crownscale (federally listed as endangered)
- spreading navarretia (federally listed as threatened; critical habitat designated in 2010 in the BSA)
- bald eagle (federally delisted and state-listed as endangered)

- coastal California gnatcatcher (federally listed as threatened; critical habitat designated in 2007 outside the BSA)
- least Bell's vireo (federally and state-listed as endangered; critical habitat designated in 1994 outside the BSA)
- southwestern willow flycatcher (federally and state-listed as endangered; critical habitat designated in 2005, with revisions proposed in 2011 outside the BSA)
- San Bernardino kangaroo rat (federally listed as endangered; critical habitat reinstated from 2002 in the BSA)
- Stephens' kangaroo rat (federally listed as endangered and state-listed as threatened).

Invasive species, which are defined as plant and animal species that are serious problems in wildlands, occur throughout the BSA, with red brome in grassland and scrub areas and a number of other invasive species found in isolated patches in the BSA, as discussed in Section 3.22.

Less than Significant with Mitigation (IV.a and IV.b)

The MCP project may result in adverse impacts to natural communities, plant species, animal species, and threatened and endangered species as described in the following sections.

Natural Communities

The MCP project (the Preferred Alternative) would result in direct impacts to the following natural communities:

- 3.2 acres of riparian forest as shown in Table 3.17.B
- 1.5 acres of riparian scrub as shown in Table 3.17.B
- 86.4 acres of Riversidean upland sage scrub as shown in Table 3.17.D
- 29.8 acres of San Jacinto River alkali communities as shown in Table 3.17.D
- 3.66 acres of areas of long-term conservation value for the least Bell's vireo as shown in Table 3.17.E
- 1.09 acres of areas of long-term conservation value for spreading navarretia as shown in Table 3.17.F
- 2.72 acres of direct impacts to areas of long-term conservation value for smooth tarplant as shown on Table 3.17.G
- 2.25 acres of areas of long-term conservation value for Coulter's goldfields as shown in Table 3.17.G

- 0.34 acre of areas of long-term conservation value for San Jacinto Valley crownscale as shown in Table 3.17.G
- 20.85 acres of areas of long-term conservation value for the Los Angeles pocket mouse as shown in Table 3.17.G
- 1.29 acres of areas of long-term conservation value for the San Bernardino kangaroo rat as shown in Table 3.17.G
- 3.1 acres of areas of long-term conservation value for the burrowing owl as shown in Table 3.17.G

In addition to these direct impacts, the construction and operation of the MCP project may result in indirect impacts on natural communities resulting from edge effects such as exotic plant infestations, pollutants from storm water runoff from the road, and unauthorized recreational use.

The following measures address MCP project effects on natural communities:

- Measure NC-1 (Project Biologist)
- Measure NC-2 (Environmentally Sensitive Areas)
- Measure NC-3 (Nesting Birds)
- Measure NC-4 (Design and Construction Management Measures)
- Measure NC-5 (Conservation Areas)
- Measure NC-6 (Salvage of Alkali Soils)
- Measure NC-7 (Commitments under the Western Riverside County Multiple Species Habitat Conservation Plan)
- Measure NC-8: Habitat Mitigation and Monitoring Plans for Western Riverside County MSHCP Compliance
- Measure VIA-2 (Construction Lighting)
- Measure VIA-7 (Lighting)
- Measure WQ-3 (Design Pollution Prevention and Treatment Best Management Practices)
- Measure IS-1 (Revegetation of Disturbed Areas)
- Measure IS-2 (Verify Seed Purity)
- Measure IS-3 (Cleaning Construction Equipment)
- Measure IS-4 (Covering Truck Loads)
- Measure IS-5 (Inspection of Material from Borrow Sites)
- Measure IS-6 (Weeds and Invasive Plants Control)

Implementation of these measures and compliance with the requirements of the Western Riverside County MSHCP would reduce the adverse impacts of the MCP project on natural communities to below a level of significance under CEQA after mitigation.

Plant Species

As discussed above, the MCP project will result in direct and indirect adverse impacts on smooth tarplant and Coulter's goldfields, which are identified as plants for protection in the Western Riverside County MSHCP.

Compliance with the requirements of the Western Riverside County MSHCP would reduce the adverse impacts of the MCP project on these plant species to below a level of significance under CEQA after mitigation.

Animal Species

The MCP project would result in direct impacts to 3.1 acres of burrowing owl breeding, foraging, and nesting habitat and 20.85 acres of direct impact to Los Angeles pocket mouse occupied habitat suitable for long-term conservation value. Project construction at bridges and larger culverts could result in adverse impacts to bat maternity and foraging roosts for a number of bat species possibly occurring in the BSA. These would all be adverse impacts of the MCP project on animal species.

The following measures are incorporated in the MCP project to address those adverse effects:

- Measure AS-1 (Burrowing Owl Habitat)
- Measure AS-2 (Active Burrowing Owl Nests)
- Measure AS-3 (Burrowing Owl Relocation/Translocation Plan)
- Measure AS-4 (Bat Maternity Roosting Season)
- Measure AS-5 (Humane Bat Eviction/Exclusion)
- Measure AS-6 (Retention of Existing Bat Roosting Habitat and Creation of Habitat Replacement Structures)

Implementation of Measures AS-1 through AS-6 and compliance with the requirements of the Western Riverside County MSHCP would reduce the adverse impacts of the MCP project on these animal species to below a level of significance under CEQA after mitigation.

The federal Migratory Bird Treaty Act and the California Fish and Game Code prohibit the destruction of active bird nests. During construction of the MCP project, there is potential for adverse impacts to active nests in trees removed during the project construction. Implementation of Measure NC-3 (Nesting Birds) would reduce the potential adverse impacts of project construction activities on active bird nests to below a level of significance under CEQA after mitigation.

Threatened and Endangered Species

The MCP project would result in the following direct impacts on threatened and endangered species:

- 0.36 acre of San Jacinto Valley crownscale in the Western Riverside County MSHCP-designated survey area for this species as shown in Table 3.21.A
- 1.09 acres of spreading navarretia in the Western Riverside County MSHCP-designated survey area for this species as shown in Table 3.2.1A
- 18.6 acres of final critical habitat for spreading navarretia as shown in Table 3.21.A
- 1.09 acres of final critical habitat with primary constituent elements for spreading navarretia as shown in Table 3.21.A
- 86.4 acres of Riversidean upland sage scrub, some of which may be occupied by or suitable for the coastal California gnatcatcher as shown in Table 3.21.B
- 194.3 acres of non-native grassland, Riversidean upland sage scrub, and alkali grassland, some of which may be occupied by or suitable for the Stephens' kangaroo rat as shown in Table 3.21.B
- 1.29 acres of San Bernardino kangaroo rat-occupied habitat as shown in Table 3.21.B

The MCP project will result in only minimal direct and/or indirect impacts to the Swainson's hawk, bald eagle, southwestern willow flycatcher, and Stephens' kangaroo rat.

All the species discussed above are potentially subject to indirect impacts that may result from edge effects, such as increased potential for fire, exotic plant and animal infestations, litter, unauthorized recreational use, reduced protection from predators, and pollutants associated with vehicle use of the freeway.

The following measures address the potential adverse impacts of the MCP project on threatened and endangered species:

- Measure TE-1 (Conservation of Off-Site Mitigation Areas)
- Measure TE-2 (Authorization of Stephens' Kangaroo Rat Take)
- Measure NC-1 (Project Biologist)
- Measure NC-2 (Environmentally Sensitive Areas)
- Measure NC-3 (Nesting Birds)
- Measure NC-4 (Design and Construction Management Measures)
- Measure NC-5 (Conservation Areas)
- Measure NC-7 (Commitments under the Western Riverside County Multiple Species Habitat Conservation Plan)
- Measure NC-8 (Habitat Mitigation and Monitoring Plans for Western Riverside County MSHCP Compliance)

Implementation of these measures and compliance with the Western Riverside County MSHCP will reduce the potentially adverse impacts of the MCP project to below a level of significance under CEQA after mitigation.

Less than Significant with Mitigation (IV.c)

The MCP project would result in temporary and permanent impacts to CDFW jurisdictional waters and USACE jurisdictional wetlands and nonwetlands. As summarized in Table 3.18.I, permanent impacts to CDFW jurisdictional waters would be 7.94 acres, and permanent impacts to total USACE jurisdictional waters would be 5.00 acres for the preferred alternative. As summarized in Table 3.18.I, temporary impacts to CDFW jurisdictional waters would be 3.63 acres for the preferred alternative. Temporary impacts to USACE jurisdictional waters would be 6.68 acres for the preferred alternative. These would be adverse permanent and temporary impacts of the MCP project on wetlands and other waters.

In addition to these direct impacts, the construction and operation of the MCP project may result in indirect impacts on wetlands and other waters, as a result of edge effects such as exotic plant infestations, pollutants from storm water runoff from the road, and unauthorized recreational use.

Measure WET-4 in Section 3.18 requires RCTC to obtain the following permits during final design:

- Section 404 permit from the USACE
- Section 1602 Agreement for Streambed Alteration from the CDFW

- Section 401 certification or waiver from the Santa Ana Regional Water Quality Control Board (RWQCB)

All conditions included in the final permits will be implemented during construction and operation of the MCP project as required in Measures WET-1 through WET-3. These measures provide for replacement and restoration of wetlands to ensure no net loss of wetlands. The implementation of Measure WET-4 in Section 3.18, in addition to Measures WET-1 through WET-3 would further ensure adverse permanent and temporary impacts of the MCP project on wetlands and other waters will be reduced to below a level of significance under CEQA.

Less than Significant (IV.d)

As discussed in Section 3.17, there are limited locations along the MCP project alignment that have been identified as providing potential wildlife corridors and habitat connectivity. Wildlife crossings are a key design feature in the MCP project. Wildlife crossings are included at key locations along the MCP project alignments within the Western Riverside County MSHCP Criteria Area to maintain habitat connectivity through the Western Riverside County MSHCP Core Area and Linkages and to avoid impacts to major drainages. Crossings will be at bridges on the MCP project facilities and culverts crossing under the MCP project facilities. The design criteria for wildlife crossings specified in the Western Riverside County MSHCP were incorporated into the design of the wildlife crossings included in the MCP project. The designs of these crossings/bridges in the MCP project will provide more than adequate undercrossing widths and heights for wildlife. The bridges will not affect the ability of fish or amphibians to pass under the MCP project facilities in existing intermittent water courses.

Because wildlife and any potential fish movements and crossings are accommodated in the design of the MCP project, the potential effects of the MCP project on wildlife and any potential fish movement would be less than significant under CEQA. No avoidance, minimization, or mitigation measures are required.

There are no native wildlife nursery sites within or immediately adjacent to the BSA. Therefore, the MCP project would not result in impacts to native wildlife nursery sites. No avoidance, minimization, or mitigation measures are required.

No Impact (IV.e)

There are no known local policies or ordinances protecting biological resources in the BSA other than the Western Riverside County MSHCP and the Habitat Conservation

Plan (HCP) for the Stephens' Kangaroo Rat. The compliance of the MCP project with the requirements of the Western Riverside County MSHCP is discussed below in response to checklist question IV.f. As a result, the MCP project will not result in impacts related to local policies or ordinances related to the protection of biological resources. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (IV.f)

As a Permittee under the Western Riverside County MSHCP, RCTC is obligated to implement specific conditions, as described in Section 13.7 of the Western Riverside County MSHCP Implementation Agreement, and to abide by the Section 10(a)(1) permit conditions. Those requirements include:

(1) Compliance with the policies for the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, as set forth in Section 6.1.2 of the Western Riverside County MSHCP;

(2) Compliance with the policies for the Protection of Narrow Endemic Plant Species, as set forth in Section 6.1.3 of the Western Riverside County MSHCP;

(3) Conducting surveys, as set forth in Section 6.3.2 of the Western Riverside County MSHCP;

(4) Compliance with the Urban/Wildlands Interface Guidelines, as set forth in Section 6.1.4 of the Western Riverside County MSHCP;

(5) Compliance with the best management practices (BMPs), as set forth in Appendix C of the Western Riverside County MSHCP; compliance with the siting and design criteria as set forth in Section 7.0 of the Western Riverside County MSHCP; and

(6) Compliance with the replacement of Public/Quasi-Public, as set forth in Section 3.2.1 of the Western Riverside County MSHCP.

As discussed in detail in Section 3.17, the MCP project has been designed to be consistent with the policies, specifications, and requirements of the Western Riverside County MSHCP. As documented in Appendix T of this EIR/EIS, RCTC has completed the Joint Project Review process with the Western Riverside County Regional Conservation Authority (RCA). Implementation of Measure TE-1, and the specific MSHCP compliance measures in Appendix T, will reduce the effects of the MCP project related to compliance and consistency with the Western Riverside County MSHCP to below a level of significance under CEQA after mitigation.

Level of Significance After Mitigation for the Preferred Alternative

As discussed above:

- The short-term and permanent impacts of the MCP project on biological resources including natural communities; wetlands and other protected waters; and plant, animal and threatened and endangered species would be mitigated to below a level of significance based on implementation of the following avoidance, minimization, and mitigation measures:

    - **Measure NC-1:** Requires a Project Biologist responsible for ensuring the proper implementation of all mitigation measures and sufficient levels of monitoring staff.
    - **Measure NC-2:** Requires designation and protection of environmentally sensitive areas prior to and during construction.
    - **Measure NC-3:** Requires protection of nesting birds.
    - **Measure NC-4**: Contains design and construction management measures that require implementing actions to avoid or minimize indirect construction and permanent impacts to the wildlife corridors, wildlife movement corridors, and biologically sensitive areas.
    - **Measure NC-5:** Requires identification of existing and proposed conservation areas within the project footprint and in the immediately surrounding areas and compliance with applicable guidelines from the Western Riverside County MSHCP to avoid and minimize impacts in those conservation areas.
    - **Measure NC-6:** Requires mapping all areas within the project disturbance limits that contain alkali soils so that these soils may be used for habitat restoration.
    - **Measure NC-7:** Requires compliance with the commitments under the Western Riverside County Multiple Species Habitat Conservation Plan
    - **Measure NC-8:** Requirements for Habitat Mitigation and Monitoring Plans for compliance with the Western Riverside County MSHCP
    - **Measure VIA-2:** Requires control of construction lighting.
    - **Measure VIA-7:** Requires sensitive design and control of permanent facility lighting.
    - **Measure IS-1:** Requires landscaping disturbed areas with weed free seed and plant materials.
    - **Measure IS-2:** Requires verification of the purity of seeds used for revegetation of disturbed areas

- **Measure IS-4:** Requires covering loads of vegetation material leaving the construction limits and removal of excess vegetation material from within the construction limits
- **Measure IS-5:** Requires inspection of potential borrow material at the borrow sites
- **Measure IS-6:** Requires the control, killing, removal, and disposal of weeds and invasive plants within the project limits
- **Measure IS-3:** Requires cleaning mud and debris from construction equipment prior to equipment leaving the construction limits
- **Measure AS-1:** Requires identifying areas of potential burrowing owl habitat and designating those areas on the project specifications and, if necessary, conducting preconstruction burrowing owl surveys.
- **Measure AS-2:** Requires protection of active burrowing owl nests.
- **Measure AS-3:** Requires development and implementation of a Burrowing Owl Relocation/Translocation Plan.
- **Measure AS-4:** Requires protection of roosting areas during the bat maternity roosting season.
- **Measure AS-5:** Requires humane bat eviction/exclusion from construction areas.
- **Measure AS-6:** Requires the retention of existing bat roosting habitat and creation of habitat replacement structures.
- **PS-1:** Requires collecting seeds in the fall from the populations of smooth tarplant within the MCP construction limits.
- **Measure TE-1:** Requires ensuring all off-site mitigation areas will be conserved in perpetuity, through fee title transfer or a conservation easement to the Western Riverside County Regional Conservation Authority.
- **Measure TE-2:** Requires confirmation of the authorization for take of Stephens' kangaroo rat prior to construction
- **Measure WQ-1:** Requires compliance with the provisions of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, and any subsequent permit; preparing and implementing the SWPPP to meet the requirements of the Construction General Permit and to identify potential pollutant sources associated with construction activities and non-storm water discharges; developing a water quality monitoring and sampling plan; and identifying, implementing, and maintaining Best Management Practices.

- **Measure WQ-2:** Requires compliance with the provisions of the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality, and a Notice of Intent, notification of discharge, and submittal of monitoring reports to the Santa Ana Regional Water Quality Control Board.
- **Measure WQ-3:** Requires implementation of design pollution prevention and treatment best management practices.
- **Measure WET-4:** Requires RCTC to obtain the following permits during final design: Section 404 permit from the USACE; Section 1602 Agreement for Streambed Alteration from the CDFW; Section 401 certification or waiver from the Santa Ana Regional Water Quality Control Board (RWQCB); and implementation of the conditions in the final permits during construction and operation.
- **DBESPs:** Requires implementation of the conditions in the DBESPs provided in the MCP MSHCP Consistency Determination in Appendix T.

- The MCP project would result in less than significant impacts related to wildlife corridors, habitat connectivity, and wildlife nursery sites. No mitigation is required.
- The MCP project would not result in impacts related to local policies or ordinances protecting biological resources. No mitigation is required.

V. CULTURAL RESOURCES: The construction and operation of the MCP project would result in significant effects related to cultural resources if they:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of CEQA

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

d) Disturb any human remains, including those interred outside of formal cemeteries

The information and analyses in this section regarding cultural resources are based on the *Historic Property Survey Report*, the *Findings of Effect*, Section 3.8, Cultural Resources, and Appendix U, Memorandum of Agreement. Section 3.8 describes the cultural resources in the MCP study area, the potential short- and long-term impacts of the MCP project on those resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project on cultural resources.

The information and analyses in this section regarding paleontological resources are based on the *Supplemental Paleontological Resources Identification and Evaluation Report* and Section 3.12, Paleontology. Section 3.12 describes the paleontological resources in the MCP study area, the potential short- and long-term impacts of the MCP project on those resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project on paleontological resources.

Existing Conditions

Section 3.8 discusses the historic resources in the project area (referred to as the Area of Potential Effect or APE in Section 3.8). The following sites are within the project area and would be impacted by the MCP project:

- **33-16598:** This large and deeply buried multi-use prehistoric site covers approximately 78 acres. The MCP project would result in the physical destruction of 2.6 acres within this site. The site is eligible for the National Register of Historic Places (National Register) and the California Register of Historical Resources (California Register) and is considered a historic resource under CEQA.

- **Site 33-15752 (CBJ Dairy):** This 1959 California ranch-style dairy is situated on 170 acres (distributed over three contiguous parcels) and is a representative but undistinguished example of a post-World War II scientific dairy type. The property lacks sufficient significance and integrity to be considered eligible for the National Register.[1] However, the resource appears to qualify as a historical resource as defined by CEQA because the resource is associated with the events that have made a significant contribution to the development of the San Jacinto Valley dairy industry in the early 1960s. Elements contributing to the resource's significance include the milking barn, three houses, and a variety of other dairy-related structures that were constructed during the resource's period of significance. Most of these structures are located in the west-corner of the property.
- **Site 33-19862:** This site is a milling station site that measures 240 x 246 ft and has two loci with no associated surface artifacts. Locus A measures 32 x 272 ft and contains nine well-worn milling slicks on five granitic boulder outcrops. Locus B measures 23 x 20 ft and contains one lightly worn milling slick on a single granitic boulder outcrop. For the purpose of the MCP cultural resources study, this site is being treated as eligible for the National Register for this undertaking and a historical resource under CEQA.
- **Site 33-19863:** This 23 x 20 ft site is a small milling station with no associated surface artifacts that contains one moderately worn milling slick on a single granitic boulder. For the purpose of the MCP cultural resources study, this site is being treated as eligible for the National Register for this undertaking and a historical resource under CEQA.
- **Site 33-19864:** This 26 x 52 ft site is a small milling station with no associated surface artifacts that contains five well-worn milling slicks on a single granitic bedrock outcrop. For the purpose of the MCP cultural resources study, this site is being treated as eligible for the National Register for this undertaking and a historical resource under CEQA.
- **Site 33-19866:** This 23 x 49 ft site is a milling station with no associated surface artifacts. It consists of three well-worn milling slicks on two granitic boulder outcrops. For the purpose of the MCP cultural resources study, this site is being

[1] The CBJ Dairy was previously evaluated as ineligible for listing in the National Register during the State Route 79 (SR-79) Realignment project. The State Historic Preservation Officer concurred with that evaluation in a letter dated August 2, 2010.

treated as eligible for the National Register for this undertaking and a historical resource under CEQA.

Site 33-3653 is being treated as eligible for the National for this undertaking and for the California Registers but is outside both the project area and the project disturbance limits for the MCP project. This site is assumed to be a historical resource under CEQA. This site will be designated as an environmentally sensitive area (ESA) to prevent inadvertent impacts to this site during project construction.

Site 33-19865 includes remnants of a historic homestead and well. The site is also within the project area for the MCP project but evaluated as not eligible for the National or the California Registers.

Section 3.12 describes seven sedimentary rock units crossed by the MCP project that may contain fossil plants and animals. Of those seven units, four were identified as High A paleontological sensitivity, three were High B sensitivity, and one was low sensitivity.

Potentially Significant Impact (V.a and V.b)

The 2.6 acres of Site 33-16598 will be directly impacted by the MCP project. Specifically, the project construction will result in the physical destruction of the northeastern 2.6 acres (3.3 percent) of Site 33-16598. The area that will be affected is highly disturbed, and trench excavations there revealed a drastic drop-off in site artifact density. The part of the site directly impacted by the MCP project does not appear to contribute to the overall site eligibility for the National Register. However, due to considerations based on Tribal comments, there will be an adverse effect to the site for the National Register under Criterion A. Because the project would destroy the 2.6 acres of the site that contributes to its eligibility for the National Register under Criterion A, this would be a significant adverse impact under CEQA. As a result, the construction of the MCP project would result in an adverse, unavoidable, significant impact under CEQA on previously unknown cultural resources including unknown resources in Site 33-16598.

Site 33-3653 is outside the project area and the project disturbance limits. That site would be marked on the project plans and specifications and in the field as an ESA, as required in Measure CUL-3 in Section 3.8. The use of ESAs to delineate areas to be avoided during project construction will substantially avoid adverse impacts to those resources. The CBJ Dairy falls within the project area for Alternatives 4 Modified, 5 Modified, and 9 Modified. However, the majority of the resource and its

structures are located within the SJN DV, which is a design variation. Only a small part of area on the eastern end of the property falls into the Base Case of each MCP project and this area of the CBJ Dairy property is vacant and does not contain any structures or uses described above that contribute to the site's significance. Because none of these minor elements contribute to the eligibility of the site as a whole, the MCP project would not have a direct impact that would constitute as a significant impact. The MCP project would have an impact to the setting of the property (i.e., its immediate surroundings) due to the incorporation of the freeway along the eastern edge. Because the property is important for its association with important events and not for its architecture, such changes to the setting of the property would not constitute a substantial impairment to the integrity of the property that would be considered a significant impact to the resource. Therefore, the MCP project would result in a less than significant impact on the resource, and no mitigation is required.

Sites 33-19862, 33-19863, 33-19864, and 33-19866 are prehistoric milling station sites within the project area and right of way that will be destroyed as a result of the MCP project. Therefore, the MCP project would result in an unavoidable, significant impact to Sites 33-19862, 33-19863, 33-19864, and 33-19866, and mitigation is required. As discussed in Section 3.8, a Memorandum of Agreement was prepared to mitigate effects of the MCP project to these sites; however, implementation of the measures in the Memorandum of Agreement (refer to Measures CUL-3, CUL-4, CUL-5, CUL-6, and CUL-7 in Section 3.8) do not fully mitigate the destruction of these four sites, and, therefore, these impacts are significant and unavoidable after mitigation under CEQA.

As discussed in Section 3.8, the MCP project may result in adverse impacts to previously unknown cultural resources that may be discovered during construction. As required in Measure CUL-1, earthmoving activities will be diverted around the immediate area of the discovery until the project archaeologist can assess the nature and significance of the find. Depending on the resources, these impacts could potentially result in a substantial adverse change in the significance of previously unknown historical resources pursuant to Section 15064.5 of the *CEQA Guidelines*.

Less than Significant with Mitigation (V.c)

As discussed in Section 3.12, the MCP project may directly or indirectly impact unique paleontological resources during construction. Many of the areas along the alignments of the MCP project have a high level of sensitivity for the presence of paleontological resources. As a result, grading and excavation for the MCP project

could adversely impact paleontological resources from as many as seven sedimentary units that may contain fossils.

To reduce impacts to paleontological resources that may be present in the areas proposed for grading and excavation for the MCP project, Measure PAL-1 in Section 3.12 requires the preparation during final design and implementation during construction of a detailed *Paleontological Mitigation Plan* (PMP). The actions required in Measure PAL-1 to monitor during construction, collect fossils, document/record those fossils, and curate the fossils in a permanent repository would reduce the adverse impacts of the MCP project to paleontological resources to below a level of significance under CEQA.

Potentially Significant Impact (V.d)

There are no documented locations of human remains in or adjacent to the disturbance limits or the project area for the MCP project. However, there is the potential that previously undocumented human remains could be disturbed during construction of the MCP project. Measure CUL-2 in Section 3.8 defines the legally required procedures when human remains are discovered, specifically, compliance with State Health and Safety Code Section 7050.5, by ceasing activity in any area or nearby area suspected to overlie remains and contacting the County Coroner. If the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendant (MLD) pursuant to Public Resources Code (PRC) Section 5097.98 and CCR Section 15064.5. If previously undocumented human remains are discovered during construction of, and cannot be avoided by, the MCP project, compliance as required in Measure CUL-2 would partially reduce the adverse impacts of the project related to human remains. However, implementation of Measure CUL-2 would not reduce those adverse impacts to below a level of significance under CEQA. As a result, should human remains be discovered during construction, the MCP project would result in significant, unavoidable, adverse impacts after mitigation related to the discovery of human remains.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above earlier:

- The effects of the MCP project on documented cultural properties, previously unknown cultural resources, and human remains described above would be partially mitigated based on implementation of the measures in the MOA

(Measures CUL-3, which requires designation and protection of ESAs around those cultural properties; CUL-4, which requires monitoring in the vicinity of those sites by a qualified Archeological Monitor; CUL-5, which requires development and implementation of a cultural resources monitoring agreement between the Transportation Agencies and the Tribes); CUL-6, which requires curation of archaeological collections as stipulated in Section V.E in the MOA; CUL-7, which requires consultation with Native American Tribes throughout construction monitoring in regards to any known cultural resources, historic properties, or the discovery of any unanticipated Native American archaeological resources; Measure CUL-1, which requires following the protocols regarding unanticipated discoveries in the MOA, including the Discovery and Monitoring Plan, and if appropriate, the Burial Treatment Plan (BTP); and Measure CUL-2, which defines the required protocols if human remains are discovered. However, even with implementation of those measures, the project effects on documented cultural properties, previously unknown cultural resources, and human remains would remain significant, adverse, and unavoidable.

- The effects of the MCP project on paleontological resources would be mitigated to below a level of significance based on implementation of the *Paleontological Mitigation Plan* (Measure PAL-1) which requires monitoring during construction, collecting and documenting fossils, and curating the fossils in an appropriate repository.

VI. GEOLOGY AND SOILS: The construction and operation of the MCP project would result in significant effects related to geology and soils if they:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault

ii) Strong seismic ground shaking

iii) Seismic-related ground failure, including liquefaction

iv) Landslides

b) Result in substantial soil erosion or the loss of topsoil

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water

The information and analyses in this section regarding geologic resources and conditions are based on the *Preliminary Geotechnical Design Report* and Section 3.11, Geology/Soils/ Seismic/Topography. Section 3.11 describes the geologic resources and conditions in the MCP study area, the potential short- and long-term impacts of the MCP project on those resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project on geologic conditions and resources.

Existing Conditions

As discussed in Section 3.11, the MCP study area is in an area with varying topography, from valleys, to low foothills, and mountains. The MCP study area is in seismically active southern California. The following active fault zones could affect the MCP study area including MCP project facilities: San Jacinto/Casa Loma, San Andreas, Whittier-Elsinore, Chino, and Cucamonga. Although there are no known landslides in the MCP study area, there is a risk of rock fall on steep slopes or localized instability along fractures in the bedrock. The San Jacinto River, San Jacinto

Valley, and Perris Valleys areas are potentially prone to liquefaction. Soils in the MCP study area include soils at risk for collapse and expansive soils.

Less than Significant (VI.a.i and VI.a.ii)

As discussed in Section 3.11, the MCP study area is not in a designated Alquist-Priolo Special Studies Zone for fault rupture hazard. The east part of the MCP study area is within a designated Earthquake Fault Rupture Hazard Zone for the Casa Loma fault, a branch fault of the San Jacinto fault zone. As a result, the MCP study area and the MCP project facilities could be subject to strong seismic shaking resulting in the risk of loss, injury, or death.

Compliance with the applicable state and Caltrans seismic design criteria would substantially reduce the potential for seismic shaking, other regional seismic conditions and activity, and fissuring to adversely affect the MCP project facilities. Therefore, the MCP project would not result in adverse impacts related to rupture of a known earthquake fault or strong seismic ground shaking and other effects associated with regional seismic conditions and activity. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (VI.a.iii, VI.a.iv, VI.b, VI.c, and VI.d)

As discussed in Section 3.11, the potential for liquefaction would affect the MCP project because they are all aligned through areas with potential for liquefaction, specifically in the San Jacinto River, San Jacinto Valley, and Perris Valley areas.

The primary areas where natural slope instability may influence the project design for the MCP project are in the Bernasconi Hills. In addition, cut-and-fill slopes would be required in the McCanna Hills area under the MCP project.

Soil conditions along the alignment of the MCP project include soils potentially subject to liquefaction, expansive soils, and soils potentially subject to collapse. The effects of those soil conditions can range from no effect to a substantial effect, depending on the location along the alignment and the soil conditions in a given area. During project construction, there may be a temporary increase in soil erosion and the loss of topsoil within the disturbance limits of the MCP project. Measure GEO-2 will address erosion and soil stability with planting of native vegetation with good soil-binding characteristics and low water requirements.

The impacts of geologic units and soils conditions on the MCP project would be adverse and potentially significant.

Measure GEO-1 requires the preparation of the *Final Geotechnical Report*, based on the *Preliminary Geotechnical Report* prepared during the planning/environmental studies, and the implementation of the recommendations of that Report in the final design and project construction. Measure GEO-3 requires the implementation of a Quality Assurance/Quality Control Plan during all site preparation, grading, excavation, and construction activities to ensure that the recommendations of the *Final Geotechnical Report* are property implemented. These measures cannot be prepared now as they require more detailed design engineering than is currently available. These measures, which are typical for any highway project, will ensure that the MCP project is designed and constructed in accordance with the most current seismic design standards. Therefore, the potentially significant adverse impacts on the MCP project related to liquefaction, landslides, soil erosion and loss of topsoil, expansive soils, and seismic effects would be substantially reduced, to below a level of significance under CEQA, based on implementation of Measures GEO-1 and GEO-3.

No Impact (VI.e)

During construction of the MCP project, self-contained portable toilet facilities will be provided within the project limits for the construction workers. The waste material in those facilities will be properly removed and disposed of and will not be discharged to the ground or to any storm water sewer. As described in Section 2.3, Project Alternatives, the MCP project does not propose the use of septic tanks or alternative waste disposal systems during construction or operations. As a result, the MCP project will not result in impacts to soils related to disposal of waste water from septic tanks or other alternative waste disposal systems. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The effects of the MCP project related to seismicity (including ground failure and liquefaction), landslides, erosion, and unstable and expansive soils would be mitigated to below a level of significance based on implementation of the recommendations in the *Final Geotechnical Report* required in Measure GEO-1; implementation of a Quality Assurance/Quality Control Plan to ensure that the recommendations of the *Final Geotechnical Report* are properly implemented during all site preparation, grading, excavation, and construction, as required in

Measure GEO-3; and Measure GEO-2 which requires planting of native vegetation with good soil-binding characteristics and low water requirements.

- The MCP project would result in less than significant impacts related to fault rupture, strong seismic shaking, or other effects associated with regional seismic conditions and activity. No mitigation is required.
- The construction and operation of the MCP project will not include use of septic tanks or alternative waste disposal systems. No mitigation is required.

VII. GREENHOUSE GAS EMISSIONS: The construction and operation of the MCP project would result in significant effects related to greenhouse gas emissions if they:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Significant and Unavoidable (VII. a and b)

The information in this section is summarized from the "Recirculated Sections of Chapter 4.0 (III, Air Quality; VII, Greenhouse Gases; 4.5, Climate Change; and Table 4.10" (January 2014). Please refer to Chapter 5, Comments and Coordination, regarding public circulation of "Recirculated Sections of Chapter 4.0." An assessment of greenhouse gas (GHG) emissions and climate change is provided later in Section 4.5, Climate Change. As shown later in Table 4.5.A, when compared to the No Build Alternative, the project alternatives would add up to 125 metric tons of CO_2 per day to the project area in 2020 and up to 277 metric tons of CO_2 per day to the project area in 2040. When added to the 17,910 metric tons of CO_2 that would be generated during construction of the MCP project (Alternative 9 Modified with the SJRB DV), it is estimated that the project would contribute up to 1,559,913 metric tons of CO_2 to the project area between 2020 and 2040. CEQA says that there is no "iron clad definition of significant effect" (State CEQA Guidelines Section 15064(b)), and so leaves it to a lead agency's discretion to determine when GHG emissions are significant under CEQA (State CEQA Guidelines, Section 15064.4.) Therefore, in the absence of a state-established numerical threshold and with an abundance of caution, RCTC has concluded that the proposed project would generate GHG emissions that may have a significant impact on the environment.

The majority (98 to 99 percent as shown later in Table 4.5.C) of these emissions is generated by on-road vehicles. RCTC does not have the legal authority to control on-road vehicle emissions. In addition, RCTC lacks the land use authority to construct off-site GHG-reducing facilities, such as solar or wind farms, capable of offsetting some or all of the project's emissions. Typical GHG reduction measures focusing on energy efficiency and the use of renewable energy sources would not be applicable due to the nature of the project. As a result, there are no feasible measures that could be directly incorporated in the project to reduce the GHG emissions generated by vehicles operating on the MCP facility to below a level of significance. GHG emissions generated by the MCP project will be partially offset by the following measures provided in Section 3.14, Air Quality:

- Measure AQ-2 (Mobile and Stationary Source Controls)
- Measure AQ-3 (Administrative Controls)
- Measure AQ-6 (Construction Emissions)

The following adaptation strategies would also partially offset GHG emissions generated by the MCP Project:

1. Landscaping reduces surface warming, and through photosynthesis, decreases CO2. Landscaping would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation planting for the project. The landscape planting would help offset any potential CO2 emissions increase. Landscaping will be provided as part of the MCP Project as described in Section 2.3.2.10, Landscaping, in Chapter 2, Project Alternatives, and as required in Measures VIS-5 (MCP Landscape Plan) and VIS-6 (Trees) provided in Section 3.7, Visual/Aesthetics.
2. The project would incorporate the use of energy-efficient lighting, such as light-emitting diode (LED) traffic signals. LED bulbs—or balls, in the stoplight vernacular—cost $60 to $70 apiece but last 5 to 6 years, compared to the 1-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the project's CO2 emissions. The use of LED bulbs would be consistent with existing practices in highway design and operations related to the use of LED lights in light fixtures along freeway mainlines and ramps, and at interchanges. No mitigation measure is required for the MCP project for this project feature.
3. According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to 10 minutes in each direction. In addition, the contractor must comply with Title 13, California CCR Section 2449(d)(3) that was adopted by the ARB on June 15, 2008. This regulation restricts idling of construction vehicles to no longer than 5 consecutive minutes. Compliance with this regulation reduces harmful emissions from diesel-powered construction vehicles. Measure AQ-4 in Section 3.14, Air Quality, requires compliance with the Caltrans Standard Specifications for Construction which include restrictions related to idling time for lane closures.

The following would also contribute to offsetting project related GHG emissions:

- The provision in California's Cap-and-Trade Program enabling fuel providers to incorporate costs of complying with the requirements of AB 32 cap on carbon emissions into the fuels they sell. This provision which became effective January 1, 2015, is a new mechanism to address the effects of carbon emissions from motor vehicles (http://www.arb.ca.gov/cc/capandtrade/guidance/faq_fuel_purchasers.pdf).
- The MCP project is part of the SCAG's 2012 Regional Transportation Plan/ Sustainable Communities Strategy, a regional plan which includes measures to address the goals of AB 32 and SB 375.
- As part of its mitigation commitments for the Western Riverside County MSHCP (see Appendix T) of this Final EIR/EIS, RCTC will acquire and place into conservation of approximately 150 acres of native plant communities that would otherwise be subject to development.

However, even with the offsets to GHG emissions generated by the MCP project noted above, the proposed project would result in a significant unavoidable impact due to the generation of GHG emissions.

As discussed above, the MCP project would add up to 1,559,913 metric tons of CO_2 to the project area between 2020 and 2040. Within its 2011 update to the 2008 Assembly Bill 32 Scoping Plan, the California Air Resources Board (ARB) determined that, under Business-as-usual (BAU) conditions, the state's 2020 GHG emissions would be 507 million metric tons. According to Executive Order S-3-05, California is required to reduce its annual emissions to 1990 levels by 2020. ARB has established that the level of annual GHG emissions in 1990 for California was 427 million metric tons of "CO_2 equivalence" (CO_2e). To meet the 427 million metric ton goal, the state would need to reduce the 2020 emissions by 80 million metric tons or approximately 15.8 percent from BAU. Based on the results shown in Table 4.5.A, in 2020 the proposed project would add up to 45,600 metric tons of CO_2 to the project area. By adding emissions to the project area that would not be generated under the No Build Alternatives, the MCP project could delay the state's goal of reducing the GHG emissions to 1990 levels by 2020. Therefore, the proposed project would conflict with the emission reduction goals in Assembly Bill 32 because it would result in significant unavoidable adverse effects related to GHG emissions which would contribute to delays in meeting the 2020 GHG emission reduction goals.

Evaluation of Potential Alternatives to Reduce or Avoid Significant Unavoidable Adverse Greenhouse Gas Emission Impacts of the MCP Project

As discussed above, the MCP project would result in significant unavoidable GHG emission impacts with 98 to 99 percent of those emissions generated by on-road vehicles on the MCP facility. The following alternatives were considered to assess whether they would meet the project objectives and also reduce or avoid the significant unavoidable adverse GHG emission effects of the MCP project. Alternatives to reduce or avoid GHG emissions are limited to the No Build Alternatives and alternatives (such as transit alternatives) that would result in substantial reductions in on-road vehicle traffic compared to the MCP project.

No Build Alternatives 1A and 1B

No Build Alternatives 1A and 1B were evaluated in detail in the Recirculated Draft EIR/Supplemental Draft EIS. None of the improvements in the MCP project would be constructed under No Build Alternatives 1A and 1B. As a result, No Build Alternatives 1A and 1B would not result in the significant unavoidable GHG emission impacts that would occur under the MCP project. However, No Build Alternatives 1A and 1B would not meet the defined objectives for the project.

Alternatives Considered in the Studies Conducted for the Community and Environmental Transportation Acceptability Process (CETAP)

The alternatives development process for the MCP project began with the Hemet to Corona/Lake Elsinore (HCLE) Corridor studies conducted for the CETAP. A Draft Tier 1 EIS/EIR for the HCLE Corridor was circulated for public review in July 2002. That Draft EIS/EIR considered 14 build alternatives between San Jacinto/Hemet and Corona/Lake Elsinore. Those alternatives included highway alternatives, and transit alternatives such as expanded bus and commuter rail services. The analysis in support of that Draft EIR/EIS indicated the alternative with the greatest transportation benefit was a highway alternative (Alternative 1A) located along Ramona Expressway, Cajalco Road, and El Sobrante Road, with a connection to Interstate 15 (I-15). That alternative best met traffic needs by providing the greatest benefits in terms of increases in speed, reductions in travel time, and congestion relief. The alternatives that focused on transit improvements did not perform as well as that alternative and, therefore, were not carried forward for detailed analysis in the Draft EIR/Draft EIS and the Recirculated Draft EIR/Supplemental Draft EIS for the MCP project. Because the transit-based alternatives did not provide a comparable level of benefit for travelers as the highway alternative, they would not meet the project objectives.

Although transit-based alternatives may result in substantially reduced GHG emissions compared to the MCP project, they would not provide the mobility benefits to the traveling public that would occur with the MCP project and, therefore, would not meet the project objectives.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above, the effects of the MCP project related to GHG emissions cannot be mitigated to below a level of significance and, therefore, would be significant and unavoidable adverse project effects.

VIII. HAZARDS AND HAZARDOUS MATERIALS: The construction and operation of the MCP project would result in significant effects related to hazards and hazardous materials if they:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

The information and analyses in this section regarding hazardous wastes and materials are based on the *Hazardous Waste Initial Site Assessment* (ISA) and Section 3.13, Hazardous Waste/Materials. Section 3.13 describes the known hazardous materials sites in the MCP study area, the potential short- and long-term impacts of the MCP project related to hazardous wastes and materials, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to hazardous wastes and materials.

The information and analyses in this section related to aviation issues are also based in part on the *Air Installation Compatible Use Zone Study for March Air Reserve Base* (2005).

The information and analyses in this section related to emergency services providers and fire risks are based on Section 3.5, Utilities/Emergency Services.

The information and analyses in this section related to existing and/or proposed schools are based on Section 3.4, Community Impacts.

Existing Conditions

The study area for the ISA extended 0.25 mile (mi) from the area of disturbance and right of way limits for the MCP project. That study identified a number of possible sources of hazardous materials and wastes in that study area:

- A number of sites with known leaking storage tanks, groundwater contamination, and spills of other materials were identified in the ISA study area as listed in Table 3.13.A and shown on Figure 3.13-1.
- There is potential for aerially deposited lead (ADL), a byproduct of the burning of lead-containing fuel in internal combustion engines, to be in the soil in areas adjacent to existing roads in the MCP study area.
- Although no longer used as a construction material, there may be existing asbestos in building materials used to construct buildings and other structures that would be removed by the MCP project. These materials include rails, bearing pads, support piers, and expansion joints in bridges; asphalt; and concrete.
- Lead-based paint (LBP) may be present in structures in the MCP study area constructed prior to 1978. Some of the yellow paints used for striping on roads and freeways may exceed the hazardous waste criteria under Title 22, CCR.
- Some electrical transformers, ballasts, electrical panels, and other structures constructed before 1976 may contain polychlorinated biphenyls (PCBs).
- Areas previously and currently used for agricultural uses may include pesticides or pesticide residues including dichlorodiphenyltrichloroethane (DDT).
- Groundwater in the MCP study area has been impacted by four sites listed in Table 3.13.A.
- There are a number of hazardous waste generators and handlers in industrial and automotive uses in the MCP study area that present potential for future releases of hazardous materials or wastes.
- Soils along and adjacent to the Burlington Northern Santa Fe (BNSF) railroad tracks may contain petroleum hydrocarbons and metals.

Less than Significant with Mitigation (VIII.a and VIII.d)

As discussed in Section 3.13, during construction of the MCP project, there is the potential to encounter hazardous materials in the soils, traffic-striping materials, transformers, buildings, and existing road structures. In addition, there are existing hazardous materials sites within and immediately adjacent to the right of way for the MCP project. Sites listed under California Government Code 65962.5, shown as "Hazardous Release Sites," are summarized in Table 3.13.A and mapped on Figure 3.13.1. Preliminary Site Investigations would be performed on all hazardous materials sites within the right of way to determine the potential hazardous materials on site. Hazardous materials spills and other contamination associated with property acquired for the MCP project would be remediated prior to project construction. Construction of the MCP project could result in exposure to asbestos, lead, and other hazardous substances as a result of demolition of existing structures. Measures HW-1 through HW-11, described in Section 3.13, will mitigate these impacts by requiring the testing of potentially contaminated soil, groundwater, and building materials, and, where contamination is found, require the clean-up and remediation of these sites in accordance with the California Health and Safety Code and the requirements of the California Department of Toxic Substances Control (DTSC). Therefore, Measures HW-1 through HW-11 would reduce potential adverse impacts from routine transport, use, or disposal of hazardous materials and hazardous material sites during the construction of the MCP project to below a level of significance under CEQA.

Less than Significant (VIII.b and VIII.c)

During construction of the MCP project, limited amounts of hazardous materials such as paints, solvents, and cleaners may be used in the construction areas. The operation of the MCP project would not result in the use of hazardous materials but because it will be a public road, it is possible that traffic accidents on the highway facility could result in the accidental release of hazardous materials. The use, handling, storage, transport, and disposal of hazardous materials and wastes are subject to strict federal, state, and local regulations which would apply to the construction and operation of the MCP project. In addition, local emergency responders are trained to safely assess and address accidental spills and releases of hazardous materials or wastes, including on public roads. As a result, the construction and operation of the MCP project would result in less than significant impacts under CEQA to the public and the environment related to hazards associated with the routine transport, use, or disposal of hazardous materials and wastes. No avoidance, minimization, or mitigation measures are required.

As discussed in Section 3.4, Community Impacts, seven existing schools are within 0.25 mile of the alignments of the MCP project: El Cerrito Middle School, Val Verde High School, Val Verde Elementary School, Sierra Vista Elementary School, Lakeside Middle School, Mountain Shadows Middle School, and Southeast High School. The construction and operation of the MCP project would not involve the release of hazardous emissions or the handling of acutely hazardous materials. Therefore, they would not result in adverse impacts to schools within 0.25 mile of the MCP project as a result of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of a school. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (VIII.e and VIII.f)

The MCP study area is approximately 2 miles north of Perris Valley Airport, 10.3 miles south of Riverside Municipal Airport, and 0.2 mile south of the March Joint Powers Authority (JPA) Airport at the March Air Reserve Base. Although the MCP project is not within 2 miles of a public use airport, it is within 2 miles of the airfield at March Air Reserve Base, which is proposed in the future for joint use with private air cargo operations.

The *Air Installation Compatible Use Zone Study for March Air Reserve Base* is the airport land use plan for the March Air Reserve Base. The west part of the MCP project, from Interstate 215 (I-215) to approximately Antelope Road, is within the March Air Reserve Base Influence Area. In the City of Perris, each MCP project is aligned perpendicularly through Influence Zones B1, B2, C1, C2, D, and E. Near I-215, the MCP project are aligned perpendicularly through Zones B1, B2, C1, C2, D, and E.

Objects taller than 35 ft are subject to airspace review for Zones B1 and B2, and objects taller than 70 ft are subject to airspace review in Zones C1, C2, D, and E. The light standards for the MCP facilities will not exceed 35 ft in height. The proposed interchanges within Influence Zones B1 and B2 (Perris Boulevard interchange for Alternatives 4 Modified and 5 Modified, and the Redlands interchange for Alternative 9 Modified) are also under 35 ft in height. The MCP/I-215 interchange in the city of Perris will be between 75 ft and 100 ft high and is within Zone C2 for the MCP project. Therefore, that interchange will be subject to airspace review during final design. The current level of design engineering does not provide sufficient detail to conduct the airspace review required by the airport land use plan. Mitigation Measure LU-4 requires that this review be performed during design. By conducting the

airspace review in compliance with the airport land use plan, Measure LU-4 would reduce the impacts of the MCP project related to any hazard or risk associated with operations at the March Air Reserve Base to below a level of significance under CEQA.

Accident Potential Zone (APZ) I extends 3,000 - 8,000 ft from the end of the runway at March Air Reserve Base, and APZ II extends 8,000 ft to 13,000 ft from the end of the runway. Alternatives 4 Modified, 5 Modified, and 9 Modified are within APZ II, and Alterative 4 Modified is also within APZ I. While implementation of the MCP project could expose more people to these APZs as a result of motorists traveling on the facility, individual exposure would be brief as vehicles pass through the area on the MCP facility. In addition, the MCP project and users of that facility would not be subject to any greater hazard or risk associated with operations at the March Air Reserve Base airport than other land uses in the vicinity of public or private airports and airfields, including March Air Reserve Base.

Less than Significant with Mitigation (VIII.g)

As discussed in Section 3.5, project-related construction activities could result in traffic delays that could affect the ability of fire and emergency service providers to meet response time goals under the MCP project. Medical emergencies could increase with the presence of construction workers and heavy machinery during construction. In addition, in the case of emergencies, construction activities could potentially limit or block emergency service access. Measures U&ES-1 through U&ES-7 and TR-1 provide specific measures for fire protection and maintenance of traffic flow during construction. Therefore, these measures would reduce this adverse impact to emergency response and access under the MCP project to below a level of significance under CEQA.

Less than Significant with Mitigation (VIII.h)

As discussed in Section 3.5, the risk of wildfires would increase during construction and operation of the MCP project because the alignment of the MCP project crosses or is adjacent to areas of undeveloped lands. These lands are often covered with native and nonnative vegetation that can be highly flammable during the dry season. Measures U&ES-1 through U&ES-7 provide specific measures for fire protection during construction and operation of the project; therefore, these measures would reduce adverse impacts involving wildfires of the MCP project to below a level of significance under CEQA.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The effects of the MCP project related to hazardous materials and hazardous materials sites would be mitigated to below a level of significance based on the following measures:
  - **Measure HW-1:** Requires conducting site investigations for the preferred alternative and, if contaminants are determined to be present, additional specialized reports may be necessary.
  - **Measure HW-2:** Requires conducting soil sampling for aerially deposited lead in unpaved locations adjacent to existing state highway right of way within the project limits, if not previously tested.
  - **Measure HW-3:** Requires conducting predemolition hazardous materials surveys for all potentially hazardous materials in structures that will be renovated or demolished.
  - **Measure HW-4:** Requires conducting inspections of utility pole-mounted transformers that will be relocated or removed.
  - **Measure HW-5:** Requires testing and removal of any yellow traffic striping and pavement-marking material in accordance with Caltrans Standard Special Provisions.
  - **Measure HW-6:** Requires compliance with the requirements of the SCAQMD Rule 1403 during renovation and demolition activities.
  - **Measure HW-7:** Requires determination of whether groundwater dewatering will be required during construction.
  - **Measure HW-8:** Requires conducting soil sampling adjacent to the Burlington Northern Santa Fe Railway Company right of way to determine whether special handling and disposal of soils in those areas is required.
  - **Measure HW-9:** Requires conducting soil sampling for pesticides and other agriculture-related materials to determine the appropriate handling and disposal of any contaminated soil.
  - **Measure HW-10:** Requires implementing the procedures in Appendix E of the Caltrans Construction Manual, Unknown Hazards Procedures for Construction, if previously unknown suspect hazardous waste or underground tanks are encountered.
  - **Measure HW-11:** Requires preparation of a site-specific Health and Safety Plan consistent with Caltrans and applicable regulatory requirements.
  - **Measure HW-12:** Requires ensuring that utility owners mark the locations of underground transmission lines and facilities.

- The effects of the MCP project related to compatibility with area airports and airspace requirements would be mitigated to below a level of significance based on implementation of Measure LU-4, which requires that an airspace review be conducted during final design.
- The effects of the MCP project on fire and emergency services providers would be mitigated to below a level of significance based on implementation of the following measures:
  - **Measure U&ES-1:** Requires the Riverside County Fire Department to identify areas adjacent to the project which are subject to wildfires and define when the high fire season occurs; installation of high fire risk warning signs if wildfire areas are identified; and posting of information on area closings and other relevant information from the Fire Department will be posted at construction sites adjacent to areas subject to wildfires.
  - **Measure U&ES-2:** Requires identification and maintenance of access to fire and emergency access roads crossing or immediately adjacent to construction areas during construction.
  - **Measure U&ES-3:** Requires incorporation of long-term provision of access to the existing fire road grid in the project final design.
  - **Measure U&ES-4:** Requires the Riverside County Fire Department to identify areas of fire hazard adjacent to construction areas and provide recommendations for appropriate fuel modification techniques for those areas during construction.
  - **Measure U&ES-5:** Requires ensuring all construction equipment and vehicles are equipped with readily accessible fire extinguishers and shovels, and are inspected and documented in compliance with minimum fire safety standards.
  - **Measure U&ES-6:** Requires incorporation of brush management zones in areas adjacent to existing reserves, the Multiple Species Habitat Conservation Plan (MSHCP) Conservation Area, and other undeveloped lands in accordance with Section 6.4 of the MSHCP in the final project plans and specifications.
  - **Measure U&ES-7:** Requires incorporation of emergency call boxes in the final plans consistent with state and local policies.
  - **Measure TR-1:** Requires the preparation and implementation of the Final Traffic Management Plan to address specific short-term traffic impacts during project construction.

- The effects of the MCP project related to wildfires would be mitigated to below a level of significance based on implementation of Measures U&ES-1 through U&ES-7, as described above.
- The construction and operation of the MCP project would result in less than significant impacts on the public, the environment, and schools related to hazards associated with the routine transport, use, or disposal of hazardous materials and wastes. No mitigation is required.

IX. HYDROLOGY AND WATER QUALITY: The construction and operation of the MCP project would result in significant effects related to hydrology and water quality if they:

a) Violate any water quality standards or waste discharge requirements

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff

f) Otherwise substantially degrade water quality

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam

j) Inundation by seiche, tsunami, or mudflow

The information and analyses in this section regarding hydrology are based on the following reports and Section 3.9, Hydrology and Floodplains:

- *Summary Floodplain Encroachment Report*
- *Final Preliminary Hydraulic Report, San Jacinto North Segment*
- *Final Location Hydraulic Study, San Jacinto South Segment*
- *Final Location Hydraulic Study, Perris Valley Storm Drain Bridge*
- *Final Location Hydraulic Study, San Jacinto Bridge at Lakeview*

The information and analyses in this section regarding water quality are based on the *Water Quality Assessment Report* and Section 3.10, Water Quality and Storm Water Runoff.

Sections 3.9 and 3.10 describe the hydrologic conditions in the MCP study area and existing conditions related to water quality, the potential short- and long-term impacts of the MCP project related to hydrology, floodplains, water quality, and storm water runoff, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to hydrologic and water quality conditions in the MCP study area.

Existing Conditions

As discussed in Section 3.9, the MCP study area is in the San Jacinto River Watershed. The primary surface water sources in the MCP study area are the San Jacinto River and Lake Perris. The MCP alignment and study area cross two floodplains/floodways: the Perris Valley Storm Drain and the San Jacinto River (at two locations).

There are no designated beneficial uses for the Perris Valley Storm Drain. As discussed in Section 3.9, there are six designated beneficial uses for the San Jacinto River.

As discussed in Section 3.10, the San Jacinto River discharges into Canyon Lake. Although the Perris Valley Storm Drain and the San Jacinto River are not on the 2010 303(d) list of impaired waters, Canyon Lake is listed as impaired for five conditions. The MCP study area is in the Perris-North, Lakeview/Hemet, and San Jacinto-Upper Pressure Management Zones of the San Jacinto River groundwater basin. Four beneficial uses have been designated for those Management Zones, which are described in Section 3.10.

Less than Significant with Mitigation (IX.a, IXe, and IX.f)

As discussed in Section 3.10, during construction of the MCP project, there is potential for soil erosion and discharge of pollutants into receiving waters. In addition, groundwater dewatering may be necessary during construction. Dewatered groundwater may contain high levels of total dissolved solids, salinity, high nitrates, or other contaminants that could be introduced to surface waters during construction. During project operations, there would be an increase in impervious surface areas with the MCP project, which would increase the volume of runoff during a storm and increase pollutant loading to receiving waters. As a result, the construction and

operation of the MCP project could result in a significant adverse effect on water quality and water quality standards and introduce additional polluted runoff to the storm water drainage system as a result of pollutants from the construction areas/project facilities entering receiving waters.

Construction of the MCP project would require new drainage facilities, as discussed in detail in Section 2.3.2.17. The drainage facilities would be sized no less than the sizes in the Master Plan for the San Jacinto River Basin. Therefore, runoff from the project would not exceed the capacity of existing or planned storm water drainage facilities.

Measures WQ-1 through WQ-3 to address construction and operation-related impacts related to water quality. Measure WQ-1 requires compliance with the following during construction which would minimize potential water quality impacts associated with construction of the MCP project:

- *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAS000002)*
- *National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation (Caltrans) Properties, Facilities, and Activities (Order No. 2010-001-DWQ)*
- *National Pollutant Discharge Elimination System (NPDES) Permit for Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County with the Santa Ana Region (Order No. R8-2010-003, NPDES No. CAS618033)*

During construction, groundwater dewatering activities would be conducted in compliance with the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality, Order No. R8-2009-0003 NPDES No. CAG998001, as specified in Measure WQ-2. The De Minimus Permit requires permittees to conduct monitoring of dewatering discharges and adhere to effluent and receiving water limitations contained within the permit so that water quality of surface waters is ensured protection, which would minimize water quality impacts associated with dewatering activities.

Measure WQ-3 requires the procedures outlined in Caltrans *Storm Water Quality Handbooks, Project Planning and Design Guide,* to be used for implementing Design Pollution Prevention and Treatment BMPs for the project that address pollutants of concern. The Treatment BMPs would target pollutants of concern from stormwater runoff, which would minimize water quality impacts associated with operation of the MCP facility. Treatment BMPs for the preferred alternative include erosion control features such as rock slope protection to minimize downstream effects, slope surface protection on new cut and fill slopes, preservation of existing vegetation, two biofiltration swales, 36 infiltration basins, and possibly detention basins in place of some of the infiltration basins as described in detail in Section 3.10.

In summary, by implementing water quality BMPs during both construction and operation of the MCP project in accordance with the applicable NPDES permits, implementation of Measures WQ-1 through WQ-3 would reduce the potentially significant adverse impacts of the construction and operation of the MCP project related to water quality to below a level of significance under CEQA.

Active groundwater wells in the MCP project limits may be relocated or abandoned during project construction. Measure WQ-4 in Section 3.10 addresses potential project effects associated with relocating and abandoning existing groundwater wells.

Less than Significant (IX.b)

As discussed in Section 3.10, the depth to groundwater in the MCP study area ranges from 20 to 350 ft below the surface. Groundwater dewatering is anticipated only in areas of deep excavation and/or shallow groundwater during construction of the MCP project. In addition, dewatering activities would be temporary, and although the volume of groundwater removed cannot be estimated based on the current level of design engineering, it is not expected to be substantial due to the fact that groundwater was not frequently encountered during borings conducted for the *Preliminary Geotechnical Design Report.* Therefore, impacts to groundwater levels from groundwater dewatering would be minimal.

No groundwater would be extracted or used during operation of the MCP project. As described in Chapter 2.0, Project Alternatives, the project design includes infiltration basins, which will infiltrate runoff from the additional impervious surface areas in the MCP project. As a result, the operation of the MCP project would not substantially change the regional rate of recharge to the groundwater basin or substantially change groundwater levels. No avoidance, minimization, or mitigation measures are required.

Less than Significant (IX.c and IX.d)

The MCP project is a linear roadway project, of which the fill would not alter drainage pattern outside of the MCP right of way. As discussed in Section 3.10, the MCP project would add between 460 acres and 525 acres of new pavement in the MCP study area. These increases in impervious areas would increase the volume of runoff during a storm, which could lead to downstream erosion. Besides providing enough bridge span to convey major flows at major drainages, the project would be designed to maintain the overall flow patterns for the areas between bridges. In the MCP project, major drainages such as the San Jacinto River and the Perris Valley Storm Drain would be spanned with bridges, and all drainages would either be crossed by bridges or the drainages conveyed under the road in culverts. The proposed cross-culverts would follow the existing flow paths to avoid increases in water surface elevation. Most of the cross-culverts are consistent in the locations and sizes with the proposed regional drainage master plan, if available. Along the MCP, BMPs and detention basins are also proposed to treat roadway runoff and offset flow increase from the project. The design and construction of the MCP project will comply with Caltrans Standard Special Provisions to reduce the potential for erosion and siltation during construction and operations. As a result, the potential impacts of project construction and operations to the course of a river or stream resulting in erosion or siltation on site or off site would be less than significant. Therefore, the MCP project would not result in adverse impacts to drainages and drainage patterns, and no avoidance, minimization, or mitigation measures are required.

As discussed in Section 3.9, Hydrology and Floodplains, surface runoff from the MCP will be captured, treated, and discharged in a manner that will not result in flooding on or off the MCP facilities. In floodplains/floodways, the project bridges will be designed to minimize floodplain encroachments, and to maintain existing flows so that flooding risks are not increased upstream or downstream of each highway crossing. The maximum increase in water surface elevation of the 100-year flood as a result of the MCP project would be:

- Increase in the elevation of the water surface in the Perris Valley Storm Drain as a result of the proposed bridge at this location in Alternatives 5 Modified and 9 Modified: 0.49 ft
- Increase in the elevation of the water surface in the San Jacinto River at Lakeview as a result of the proposed bridge at this location in Alternatives 4 Modified, 5 Modified, and 9 Modified: 0.07 ft

- Increase in the elevation of the water surface in the San Jacinto River at Lakeview as a result of the proposed bridge at this location in Alternatives 4 Modified, 5 Modified, and 9 Modified with the SJRB DV: 0.7 ft
- Increase in the elevation of the water surface in the San Jacinto River at SR-79 as a result of the proposed bridge at this location in Alternatives 4 Modified, 5 Modified, and 9 Modified: 0.10 ft
- Increase in the elevation of the water surface in the San Jacinto River at SR-79 as a result of the proposed bridge at this location in Alternatives 4 Modified, 5 Modified, and 9 Modified with the SJN DV: 0.35 ft

For the MCP project, the 100-year flood would continue to be contained, and no significant risk to life or property would occur as a result of the project bridges at these locations. The MCP project would alleviate some existing flooding conditions in the area based on the design of the bridges included in MCP project. Because the MCP project will minimize floodplain impacts by constructing bridges, viaducts, and culverts, the MCP project would result in a minimal change in the capacity of the San Jacinto River and the Perris Valley Storm Drain to carry water and would not require the realignment of any drainages crossed by the alignments of the MCP project. The MCP project would result in a minimal increase in flood heights and flood limits that would not result in any substantial change in flood risks or damage to life or property. No avoidance, minimization, or mitigation measures are required.

Based on the facts stated above, impacts to drainage patterns under the MCP project are less than significant, and no avoidance, minimization, or mitigation measures are required.

No Impact (IX.g)

As described in Section 2.3, Project Alternatives, the MCP project does not include the provision of any housing. As a result, the MCP project would not result in the placement of any housing in a mapped 100-year flood hazard area. No avoidance, minimization, or mitigation measures required.

Less than Significant with Mitigation (IX.h)

Based on the assessment of level of risk in the Location Hydraulic Studies for the three locations where the MCP alignments cross floodplains, the floodplain encroachments at those locations are considered “low” risk. Nonetheless, the placement of structures in these floodplains would be an adverse impact of the MCP project.

During final design, final Location Hydraulic Studies, based on the Location Hydraulic Studies conducted for the planning/environmental studies would be prepared. The specific change in the floodplain/floodway elevations as a result of the MCP project would be evaluated based on the final design of the project bridges and roads where they encroach on the 100-year floodplain/floodway. As specified in Measure FP-1 in Section 3.9, final Location Hydraulic Studies would be prepared during final project design. The change in floodplain/floodway elevations would be refined and evaluated based on final design plans of the bridges and road where they encroach on the 100-year floodplain/floodway. The refined modeling results would be included in the application for a Conditional Letter of Map Revision and Letter of Map Revision, which would be processed through the Riverside County Flood Control District and Water Conservation District and the Federal Emergency Management Agency (FEMA). Although the floodplain map revisions would not modify the physical effects of MCP project features placed in floodplains/floodways, they would protect the public by ensuring that the Flood Insurance Rate Maps (FIRMs) for the affected areas are current and properly reflect potential flood water elevations with the effects of the MCP project. The risk associated with the floodplain/floodway encroachments of the MCP project, already assessed as "low" risk would not change and the appropriate updating of the FEMA maps would be conducted. As a result, the effects of the MCP project on floodplains/floodways would be less than significant under CEQA after implementation of Measure FP-1.

In the event the planned Perris Valley Storm Drain and San Jacinto River levee projects are constructed prior to construction of the MCP project, a Conditional Letter of Map Revision and Letter of Map Revision would no longer be required for the MCP project.

Less than Significant (IX.i)

According to the City of Perris General Plan, Safety Element, the MCP project alignment is within the dam inundation zone for Lake Perris. In 2005, the Department of Water Resources (DWR) identified potential seismic safety risks in the foundation of Perris Dam. While there was no imminent threat to life or property, in the interest of ensuring public safety, the State lowered the water level of Lake Perris, and then initiated the EIR process to complete repairs to the dam. DWR certified the Final EIR for Perris Dam Remediation Program on November 23, 2011. Project components include remediation of Perris Dam and replacement of the outlet tower. Construction of the dam remediation began in mid-2014. Completion of the dam remediation construction is expected at the end of 2017, prior to completion of construction of the

MCP project.[1] Remediation of Perris Dam would address seismic safety concerns and bring the facilities up to current safety standards, which would reduce the chance of dam failure. In addition, the proposed project would not increase exposure of people to risk of inundation compared to existing conditions because users of MCP currently using local streets within the dam inundation zone. Because the chance of dam failure is minimal and the MCP facility would not increase risk of inundation, impacts related to inundation from dam failure would be less than significant, and no mitigation is required.

Less than Significant (IX.j)

A seiche is an occasional and sudden series of waves in an enclosed body of water that results in fluctuations in the water level in that water body. Seiche can be caused by wind, earthquakes, and changes in barometric pressure. The MCP study area is adjacent to Lake Perris, an approximately 2,300 acres reservoir at the southern end of the State Water Project Aqueduct system. Seiching is a phenomenon that occurs when seismic groundshaking induces standing waves (seiches) inside water retention facilities, such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. Lake Perris is located just north of the MCP project. However, the probability of a seiche that would inundate the MCP freeway is remote, because of the distance of the MCP project from the Perris Dam.

A tsunami is an unusually large sea wave produced by a seaquake, an undersea volcanic eruption, or other major shifts in earth materials in a large open body of water. Tsunamis occur in seas and oceans. The MCP study area is a substantial distance from the Pacific Ocean and, therefore, the MCP project facilities would not be subject to risks or damage from a tsunami. Mudflows are downhill movement of soft wet earth and debris, made fluid by rain. The project site is relatively flat and the potential for mudflows and mudslides are low. Therefore, impacts related to seiche, tsunami, and mudflow are less than significant, and no mitigation is required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The effects of the MCP project on water quality as a result of erosion and discharge of pollutants and storm water runoff would be mitigated to below a

[1] California Department of Water Resources. Lake Perris Dam Project. Website: http://www.water.ca.gov/lakeperris/, accessed September 22, 2014.

level of significance based on implementation of Measures WQ-1, WQ-2, and WQ-3, which were described earlier in Section IV, Biological Resources.

- The effects of the MCP project related to floodplains would be mitigated to below a level of significance based on implementation of Measure FP-1, which requires RCTC to process a Conditional Letter of Map Revision and a Letter of Map Revision for the floodplain and floodway encroachments through the Riverside County Flood Control and Water Conservation District and Federal Emergency Management Agency if the Perris Valley Storm Drain and the San Jacinto River levee projects are not constructed prior to construction of the MCP.
- The construction of the MCP project would result in less than significant impacts related to groundwater levels, surface water drainage patterns, and runoff. No mitigation is required.
- The MCP project would not provide any housing in a mapped 100-year flood hazard area. No mitigation is required.
- The MCP project would not result in less than significant impacts related to flooding, levee or dam failure, seiche, tsunami, or mudflow. No mitigation is required.

X. LAND USE AND PLANNING: The construction and operation of the MCP project would result in significant effects related to land use if they:

a) Physically divide an established community

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, Specific Plan, local coastal program, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

c) Conflict with any applicable HCP or NCCP

The information and analyses in this section regarding land use and the HCPs applicable to the study area are based on the *Community Impact Assessment* (CIA) and Sections 3.1, Land Use, 3.4, Community Impacts, and 3.17, Natural Communities. The information and analyses in this section regarding recreation resources protected under Section 4(f) are based on the *Final Section 4(f) Evaluation* and Section 3.1. Section 3.13 describes the existing and planned land uses and recreation resources in the MCP study area, the potential short- and long-term impacts of the MCP project related to land use and recreation resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to land use and recreation resources.

Existing Conditions

As discussed in Section 3.1, the alignments of the MCP project cross the cities of Perris and San Jacinto and areas in unincorporated western Riverside County. The land uses in this area are rural and suburban uses including residential, agricultural, industrial, commercial, open space/conservation areas, and undeveloped lands. The three jurisdictions have adopted General Plans, which are intended to guide future development in those areas including economic development, infrastructure such as roads and highways, and protection of the resources and values considered important in those communities.

As discussed in Section 3.17, the Western Riverside County MSHCP is a comprehensive, multijurisdictional Western Riverside County MSHCP and Natural Communities Conservation Plan (NCCP), focusing on the conservation of species and their associated habitats in western Riverside County. The Western Riverside County MSHCP allows its permittees to better control local land use decisions and maintain a strong economic climate in the region while adhering to the requirements of the Federal Endangered Species Act (FESA) and the California Endangered Species Act

(CESA). RCTC and Caltrans are participating agencies and permittees in the Western Riverside County MSHCP.

The *Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County* (March 1996) produced by the Riverside County Habitat Conservation Agency (RCHCA) established a regional system of seven core areas consisting of public and private lands for the conservation of Stephens' kangaroo rat. The MCP is adjacent to, but does not extend into, reserve lands identified in the HCP for the Stephens' kangaroo rat.

Less than Significant with Mitigation (X.a)

As discussed in Sections 3.1 and 3.4, the MCP project would result in physical changes to existing land uses and the communities along the alignment of the MCP project. Alternative 9 Modified will divide an established community in the city of Perris by separating an existing residential area located between Placentia Avenue and Rider Street. Approximately 20 residences would be separated to south of the MCP facility, and 315 residences would remain north of the freeway. However, connectivity of this neighborhood would be maintained with the construction of overcrossings at Placentia Avenue and Perris Boulevard as part of the MCP project, to provide access between these two areas, as well as to nearby community facilities, including Paragon Park and the fire station south of Alternative 9 Modified along Placentia Avenue. In addition, the freeway would be below grade through this area to minimize the impacts of the facility to community cohesion. By providing for design and construction of landscaping and hardscaping consistent with that in the existing community, implementation of Measure CC-2 as part of Alternative 9 Modified would contribute to reducing potential impacts related to physically dividing a community, to below a level of significance under CEQA.

Alternatives 4 Modified and 5 Modified would not physically divide residential communities; therefore, no mitigation is required. Alternatives 4 Modified and 5 Modified would result in business displacements; however, these displacements would not result in division of existing well-established business parks or commercial/industrial areas. Therefore, no mitigation is required.

Less than Significant with Mitigation (X.b)

As discussed in detail in Section 3.1, the MCP project would impact existing residential, commercial (retail/office), industrial, transportation (roads), agricultural, and open space (habitat reserves, parklands, and undeveloped lands) uses. The

segments of the MCP project that follow existing Ramona Expressway are generally compatible with the adjacent land uses, as these areas have been planned to include either a Community and Environmental Transportation Acceptability Process (CETAP) corridor or a General Plan roadway (expressway or urban arterial). In general, the MCP project in the Lakeview/Nuevo Area is compatible with the planned CETAP corridor.

In areas where the MCP project is along the alignment of the Ramona Expressway, there are some conflicts with land use compatibility. In the City of Perris, the MCP project crosses areas where there are a variety of existing residential, commercial, and industrial uses, and the compatibility of the MCP project with those existing land uses is low. In Perris, the MCP project does not follow the CETAP corridor alignment shown in the General Plan Circulation Element and is aligned in areas where no road currently exists or is planned for, or where the existing or planned roadways are two- to six-lane arterials (e.g., Placentia Avenue and Rider Street in the city of Perris), rather than the six-lane limited access facility proposed as the MCP project.

Following identification of the preferred alternative and certification of the Final EIR/EIS, RCTC will request amendments to the Riverside County and Cities of Perris and San Jacinto General Plans, specifically the Land Use and Circulation Element, as indicated in Measure LU-5, to reflect the final MCP alignment, interchange locations, and to change the land use designations on property that would be acquired for the project to a transportation or public use designation. After the General Plans are amended to reflect the MCP alignment and facility, the MCP would be consistent with those General Plans, and the project impacts related to general plan consistency would be reduced to below a level of significance under CEQA. Although this measure is not enforceable by RCTC, it is expected that the County and the cities would approve these amendments because of the ongoing participation of these agencies in the planning of the MCP project.

Less than Significant with Mitigation (X.c)

As permittees under the Western Riverside County MSHCP, RCTC and Caltrans are obligated to implement specific conditions, as described in Sections 13.7 and 13.8 of the Western Riverside County MSHCP Implementation Agreement, and to abide by the Section 10(a)(1) permit conditions. Those requirements were listed earlier in the response to checklist question IV.b under Biological Resources. As discussed in detail in Section 3.17 and the response to checklist response IV.f, the MCP project has been designed to be consistent with the policies, specifications, and requirements

of the Western Riverside County MSHCP. As documented in Appendix T of this Final EIR/EIS, RCTC has completed the Joint Project Review process with the Western Riverside County RCA. Implementation of measures committed to by RCTC in the MSHCP Consistency Analysis and DBESP (Appendix T) will reduce the effects of the MCP project related to compliance and consistency with the Western Riverside County MSHCP to below a level of significance under CEQA after mitigation.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above, the effects of the MCP project related to physical effects on established communities would be mitigated to below a level of significance based on implementation of Measure CC-2 which requires that school crossing guards be present in the vicinity of any construction areas near schools and near the project limits when students are present to protect the safety of the students. The project effects related to conflicts with adopted land use plans would be mitigated to below a level of significance based on implementation of Measure LU-5 which requires RCTC to request the County of Riverside and the City of Perris to amend their General Plans to request the final MCP alignment. Conflicts with the Western Riverside County MSHCP would be mitigated to below a level of significance based on compliance with the MSHCP including implementation of the measures in the MSHCP Consistency Analysis and DBESP provided in Appendix T.

XI. MINERAL RESOURCES: The construction and operation of the MCP project would result in significant effects related to mineral resources if they:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan

The information in this section is from the California State Geological Survey.[1]

Existing Conditions

According to the California State Geological Survey, the MCP study area and the areas within the project limits for the MCP project are not within any state-designated principal mineral-producing localities, and there are no significant mineral deposits in those areas.

No Impact (XI.a and XI.b)

Because the project limits for the MCP project are not within a state-designated principal mineral-producing locality and there are no significant mineral deposits in the area, it would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated in any land use plan. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above, the MCP project would not result in impacts on mineral resources, and no mitigation is required.

[1] California Department of Conservation Website: http://www.conservation.ca.gov/cgs/minerals/min_prod/Documents/non_fuel_2009.pdf, accessed December 1, 2011.

XII. NOISE: The construction and operation of the MCP project would result in significant effects related to noise if they:

- **a) Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies**
- **b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels**
- **c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project**
- **d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project**
- **e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels**
- **f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels**

The information and analyses in this section regarding noise are based on the *Final Noise Study Report*, the *Noise Abatement Decision Report*, and Section 3.15, Noise, of this EIR/EIS. Section 3.15 describes the existing noise environment in the MCP study area, the potential short- and long-term noise impacts of the MCP project, and avoidance, minimization, and mitigation measures to address the adverse noise impacts of the MCP project.

Existing Conditions

As discussed in Section 3.15, existing noise sensitive land uses in the MCP study area include residences, schools, a church, and parks. Existing land uses, short- and long-term locations, interior-exterior locations, and modeled receptor locations in the project area are shown on Figure 3.15.1.

The primary source of noise in the MCP study area is traffic on I-215, the Ramona Expressway, Sanderson Avenue, and adjacent local streets. Short-term (15-minute) noise measurements were conducted to document existing noise levels at 63 representative frequent outdoor use areas along the project corridor. Monitored short-term existing noise levels in the study area range from 37.2 to 66.7 A-weighted decibels (dBA) as shown in Table 3.15.C. Long-term monitoring of ambient noise levels was conducted at 12 locations in the MCP study area shown on Figure 3.15.1; those monitoring results are summarized in Tables 3.15.D through 3.15.O.

Interior and exterior noise levels were measured at seven schools; those noise levels are shown on Table 3.15.P.

Potentially Significant Impact (XII.a and XII.c)

Traffic noise impacts result from one or more of the following occurrences: (1) an increase of 12 dBA or more over the corresponding modeled existing noise levels, or (2) predicted noise levels approach or exceed the Noise Abatement Criteria (NAC). When traffic noise impacts have been identified, noise abatement measures must be considered. The MCP project would physically alter the vertical and horizontal alignment of the existing roadway and would result in an increase in operational traffic noise.

For this CEQA analysis for the MCP project, the federal NAC is the "applicable standards of other agencies" referred to in checklist question XII.A, and a 12 dBA increase in noise over existing levels is considered the "substantial permanent increase" per checklist question XII.C.

Tables 3.15.Q through 3.15.X summarize the traffic noise modeling results for existing conditions and 2040 conditions with and without the MCP project. Modeled 2040 traffic noise levels with the MCP project (Alternatives 4 Modified, 5 Modified, and 9 Modified, with design variations) were compared to existing conditions and to 2040 no project conditions. The comparison to future “no project” conditions indicates the direct effect of the MCP project.

The results of the existing traffic noise modeling are shown in Tables 3.15.Q through 3.15.X. Under the existing traffic noise conditions, a total of 10 of 337, 5 of 358, and 5 of 355 modeled receptors under Alternatives 4 Modified, 5 Modified, and 9 Modified, respectively, approach or exceed the 67 dBA equivalent continuous sound level (L_{eq}) NAC for residential and other noise sensitive uses.

A total of 15 of 337, 14 of 358, and 10 of 355 modeled receptors under Alternatives 4 Modified, 5 Modified, and 9 Modified, respectively, would approach or exceed the 67 dBA L_{eq} NAC under the 2040 no build traffic noise conditions. Of the 337 modeled receptors under the Alternative 4 Modified traffic noise conditions, 73 receptors would approach or exceed the 67 dBA L_{eq} NAC, and 133 receptors would experience a substantial increase in noise of 12 dBA or more over the corresponding modeled existing noise level. Of the 358 modeled receptors under the Alternative 5 Modified traffic noise conditions, 69 receptors would approach or exceed the 67 dBA L_{eq} NAC, and 151 receptors would experience a substantial increase in noise of 12 dBA or more

over the corresponding modeled existing noise levels. Of the 355 modeled receptors under Alternative 9 Modified traffic noise conditions, 66 receptors would approach or exceed the 67 dBA L_{eq} NAC, and 150 receptors would experience a substantial increase in noise of 12 dBA or more over the corresponding modeled existing noise levels.

All noise abatement options were considered for the MCP project. However, because of the configuration and location of the project, only abatement in the form of noise barriers is considered to be feasible. Noise abatement was considered for each site where a traffic noise impact would occur. The locations of the modeled noise barriers for Alternatives 4 Modified, 5 Modified, 9 Modified, and the SJRB DV are shown on Figures A-5, A-6, and A-7 in the *Noise Study Report*, respectively. The locations of the feasible and reasonable noise barriers for Alternatives 4 Modified, 5 Modified, 9 Modified, and the SJRB DV are shown on Figures 3.15.2, 3.15.3, 3.15.4, and 3.15.5, respectively, in Section 3.15 of this EIR/EIS.

Each noise barrier was evaluated for feasibility based on an achievable noise reduction of 5 dB or more. Of all the modeled noise barriers evaluated, Noise Barriers Alt4-NB-4 for Alternative 4 Modified, Alt5-NB-4 for Alternative 5 Modified, and Alt9-NB-4 for Alternative 9 Modified were determined to be not feasible because they would not reduce noise levels by 5 dBA or more; therefore, they were not evaluated for reasonableness.

Table 3.15.Z lists all the noise barriers determined to be feasible. For a noise barrier to be considered reasonable from a cost perspective, the estimated construction cost of the barrier should be equal to or less than the total cost allowance calculated for that barrier. Noise barriers that are considered both reasonable and feasible would be constructed as part of the MCP project to mitigate project-related noise impacts. Table 4.XII.A (also shown in Section 3.15 as Table 3.15.AB) lists the feasible and reasonable noise barriers for each MCP Build Alternative that would be required to mitigate traffic noise impacts on noise-sensitive land uses. The remaining noise barriers were determined to be not reasonable because they did not reduce noise levels by 7 dBA or more at one or more benefited receptors or the estimated construction cost of the barrier exceeded the total reasonable allowance. Of the feasible and reasonable noise barriers listed in Table 4.XII.A, all noise barriers would reduce noise levels to 67 dBA L_{eq} or below, except for Alt 9 NB-1 (optimized).

Table 4.XII.A Summary of Preliminary Recommended Noise Barriers for the Preferred Alternative

Alternative	Noise Barrier No.	Height (ft)	Break Line-of-Sight?	Length of Barrier (ft)	Number of Benefited Residences[1]	Barrier Location	Estimated Noise Barrier Construction Cost[2]
Alt 9 Modified with SJRB DV	Alt9-NB-1 (optimized)	6	No	3,219	24	EOS	$1,158,840
	Alt9-NB-5 (optimized)	10	Yes	175	2	Property Line	$105,000
	Alt9-NB-31/32/33	12	No	5,136/987/1,530	115	EOS	$5,510,160
	Alt9-SJRB-NB-43	12	Yes	4,736	96	EOS	$3,409,920
	Alt9-NB-44	6	Yes	5,213	39	EOS	$1,876,680
	Alt9-NB-50	8	Yes	99	1	Property Line	$48,520

Source: *Noise Abatement Decision Report* (April 2012).

[1] Number of residences attenuated by 5 dB or more by the modeled barrier.

[2] The estimated noise barrier construction cost was provided by Jacobs Engineering.

Alt = Alternative
dB = decibels
dBA = A-weighted decibels
EOS = edge of shoulder
ft = feet
NB = Noise Barrier
SJRB DV = San Jacinto River Bridge Design Variation

In the remaining areas where noise barriers are not feasible or reasonable, noise levels would continue to approach or exceed the 67 dBA L_{eq} NAC. In addition, some of the impacted receptors would continue to experience a substantial noise level increase of 12 dBA over their existing noise levels.

For proposed noise barriers on private property, Caltrans *Traffic Noise Analysis Protocol* (May 2011) requires that 100 percent of the property owners adjacent to that noise barrier approve the installation of that noise barrier at that location. For noise barriers on State property, if 50 percent or more of the benefited receptors oppose the installation of that noise barrier at that location, then it is not considered reasonable. In accordance with Caltrans *Traffic Noise Analysis Protocol*, RCTC sent letters in January 2014 by certified mail to each property owner adjacent to a proposed noise barrier for Alternative 9 Modified with the SJRB DV (Preferred Alternative) to survey the owners on whether they would approve or disapprove of the noise barriers at the locations at or adjacent to their properties. Each letter included a noise barrier survey letter and survey form, a map showing the location of the noise barrier being considered specific to the individual property, and a postage paid return envelope. For the noise barriers proposed on private property (NB-5, NB-50, NB-43, and NB-44), less than 100 percent of the property owners did not respond to the survey. Similarly, for the noise barriers that would be located on future State property, substantially less than 50 percent of the adjacent property owners responded to the survey; therefore, it was not possible to reach a conclusion on whether the noise barriers were reasonable under Caltrans *Traffic Noise Analysis Protocol*. However, as Lead Agency under CEQA, RCTC will carry the reasonable and feasible noise barriers forward into final design for the preferred alternative and will continue to work with individual property owners to assess their support for those noise barriers. RCTC will consult with Caltrans on the results of future noise barrier surveys.

Minimization Measure N-1 requires the implementation of noise barriers based on the selected alternative. However, as described above, even with the implementation of this measure, under all the MCP Build Alternatives, some sensitive receptors would continue to be exposed to noise levels approaching or exceeding the 67 dBA L_{eq} NAC or experience a substantial noise increase of 12 dBA over their existing noise level. Therefore, the MCP project would result in significant and unavoidable noise impacts.

Less than Significant (XII.b)

As discussed in Section 3.15, Noise, highways typically are not major sources of groundborne noise or vibration. Groundborne vibrations are mostly associated with passenger vehicles and trucks traveling on roads with poor conditions, such as potholes, bumps, expansion joints, or other discontinuities in the road surface. Passenger vehicles and trucks would cause effects, such as rattling of windows, and the source is almost always airborne noise. Because the project would use new pavement with proper maintenance, there would be no potholes, bumps, expansion joints, or other discontinuities in the road surface that would generate groundborne vibration or noise impacts from vehicular traffic traveling on MCP, I-215, Ramona Expressway, and Sanderson Avenue. Therefore, groundborne vibration impacts generated by vehicles traveling on MCP, I-215, Ramona Expressway, and Sanderson Avenue under the MCP project would be considered less than significant.

However, vibration generated by construction equipment can result in varying degrees of ground vibration, depending on the equipment. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings situated on soil near the active construction area respond to these vibrations, which range from imperceptible to low rumbling sounds with perceptible vibrations and slight damage at the highest vibration levels. Typically, construction-related vibrations do not reach vibration levels that would result in damage to nearby structures. However, old and fragile structures would require special consideration to avoid damage.

The Caltrans Transportation- and Construction-Induced Vibration Guidance Manual (Caltrans, June 2004) shows that the vibration damage threshold for continuous/ frequent intermittent sources such as pile driving is 0.25 peak particle velocity (PPV) (inches per second [in/sec]) for historic and old buildings, 0.3 PPV (in/sec) for old residential structures, and 0.5 PPV (in/sec) for new residential structures. The damage threshold for blasting from the Federal Transit Administration (FTA)'s Transit Noise and Vibration Impact Assessment (FTA, May 2006) is 90 vibration velocity decibels [VdB] for buildings extremely susceptible to vibration damage, 94 VdB for nonengineered timber and masonry buildings, and 98 VdB for engineered concrete and masonry buildings. The same manual shows the vibration annoyance potential criteria to be barely perceptible at 0.01 PPV (in/sec), distinctly perceptible at 0.04 PPV (in/sec), and strongly perceptible at 0.10 PPV (in/sec) for continuous/frequent intermittent sources such as pile driving. It also shows that the vibration annoyance criteria to be barely perceptible at 0.04 PPV (in/sec), distinctly perceptible at 0.25

PPV (in/sec), and strongly perceptible at 0.9 PPV (in/sec) for transient sources such as blasting. These thresholds were used to evaluate short-term, construction-related groundborne vibration.

The FTA, in its Transit Noise and Vibration Assessment (FTA, May 2006), shows that a typical-impact pile driver would generate approximately 0.644 PPV (in/sec) when measured at 25 ft. The closest residences to potential pile driving on the project site are approximately 228 ft, 170 ft, and 57 ft for Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified, respectively. At these distances, the closest residences would experience vibration levels of 0.057 PPV, 0.078 PPV, and 0.260 PPV for Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified, respectively. Under all Build Alternatives, vibration levels would be all below the damage threshold for old residential buildings. None of the residences located near potential pile driving locations are considered historic buildings. Other construction equipment and activities would generate vibration levels much lower than those of pile driving and would, therefore, result in lower vibration levels. Although vibration level would be either distinctly perceptible or strongly perceptible, no substantial groundborne vibration levels or direct or indirect impacts from pile driving would occur.

Also, the FTA shows that vibration levels for construction related blasting is approximately 100 VdB at a distance of 50 ft. The closest residences to potential blasting are approximately 62 ft, 125 ft, and 175 ft for Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified, respectively. At this distance, the closest residences would experience vibration levels of 98 VdB, 92 VdB, and 98 VdB for Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified, respectively. These vibration levels range between barely perceptible to distinctly perceptible and could result in community annoyance. The closest residence to potential blasting locations under Alternative 4 Modified would experience vibration levels that exceed a damage threshold of 94 VdB. Therefore, a minimum distance of 100 ft is required from blasting activity to the closest residence. The closest residence under Alternatives 5 Modified and 9 Modified would not reach the damage threshold of 94 VdB. The implementation of Measure N-5 would further minimize potential groundborne vibration and groundborne noise impacts under Alternative 9 Modified. Therefore, short-term construction impacts related to groundborne vibration or groundborne noise would be less than significant, and no mitigation measures are required.

Less than Significant with Mitigation (XII.d)

Implementation of the project would result in potential short-term noise impacts during construction of the MCP project. Construction of the project would comply with local jurisdiction noise restrictions, as well as the Caltrans Standard Specifications Section 14-8.02 and Caltrans Standard Provisions S5-310, as outlined in Avoidance and Minimization Measures N-2 and N-3. In addition, Avoidance and Minimization Measures N-2 and N-3 would further minimize potential construction noise impacts. By complying with these standards and implementing these measures, potential short-term construction noise impacts would be less than significant, and no mitigation measures are required.

No Impact (XII.e and XII.f)

The MCP study area is approximately 2.0 miles north of Perris Valley Airport, 10.3 miles south of Riverside Municipal Airport, and 0.2 mile south of the March JPA Airport at the March Air Reserve Base. The MCP project is not a noise-sensitive land use and would not expose people to any greater aviation-related noise effects from these public and private airports than are already experienced in the MCP study area. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The operation of the MCP project would result in long-term noise effects that would be only partially mitigated based on implementation of noise barriers as required in Measure N-1. As a result, the operation of the MCP project would result in significant unavoidable long-term noise impacts.
- The construction of the MCP project would result in less than significant impacts related to groundborne noise and vibration. No mitigation is required.
- The construction of the MCP project would result in short-term noise effects that would be reduced to below a level of significance based on compliance with local jurisdiction noise restrictions, Caltrans Standard Specifications 14-8.02, and Caltrans Standard Provisions S5-310, as required in Measures N-2 and N-3.
- The MCP project would not expose people to increased aviation-related noise effects. No mitigation is required.

XIII. POPULATION AND HOUSING: The construction and operation of the MCP project would result in significant effects related to population and housing if they:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The information and analyses in this section regarding population are based on the CIA, and Sections 3.1, Land Use; 3.2, Growth; and 3.4, Community Impacts. Sections 3.1 and 3.2 describe the existing and planned land uses in the MCP study area, the potential short- and long-term land use impacts of the MCP project including impacts related to population, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to the acquisition of land occupied by residential uses.

Existing Conditions

As discussed in Section 3.1, the alignments of the MCP project crosses the cities of Perris and San Jacinto and unincorporated areas in western Riverside County. The existing and General Plan land uses in these areas are rural and suburban uses including residential, agricultural, industrial, commercial, and open space/ conservation uses, and undeveloped lands. The cities of Perris and San Jacinto and Riverside County have adopted General Plans, which are intended to guide future development in those areas including economic development, infrastructure such as roads and highways, and protection of the resources and values considered important in those communities. The existing and General Plan residential uses in the MCP study area include single-family, multi-family, and mobile home units.

Less than Significant (XIII.a)

Under the MCP project, a new limited-access highway facility would be constructed through the cities of Perris and San Jacinto. As discussed in Section 3.2, the MCP project would have some influence on the location, amount, rate, or type of growth in most of the MCP study area, based on consideration of existing and approved development in the area, the lands uses designated in the adopted General Plans, and the integration of the MCP project in regional land use and transportation planning through the Riverside County Integrated Project (RCIP) process.

Areas in this part of western Riverside County and the Cities of Perris and San Jacinto have been planned for growth (land development leading to increased population and employment in the MCP study area), supported by the existing and future transportation infrastructure, including the CETAP corridor (MCP project). The areas compatible with the General Plan Land use designations would not experience unplanned growth effects as a result of the MCP project. However, as discussed in Section 3.2, there is some potential for planned and unplanned growth-related effects where the MCP project does not follow the alignment of the CETAP corridor or the alignments shown in the Circulation Elements in the adopted local General Plans. Those potential growth-related effects would largely be at the new service and arterial road interchanges on the MCP facility. Although the existing uses at those locations may be agricultural or vacant, the majority of those interchanges are in areas shown on the General Plans for future commercial, industrial, and residential uses. The potential for the MCP project has been known since the issuance of the Notice of Preparation in 2004. Since that time, there has been no indication of developers intensifying or substantially modifying development proposals, even in the locations of future service and arterial interchanges, in response to a possible future MCP project in that part of western Riverside County. As result, the potential growth-related effects for the MCP project are limited and are less than significant under CEQA. No avoidance, minimization, or mitigation measures are required.

As discussed in Section 3.1, to provide for consistency between the MCP project conditions and the local jurisdictions' General Plans, Measure LU-5 requires RCTC to request Riverside County and the Cities of Perris and San Jacinto to amend their General Plans to reflect the adopted alignment of the MCP project and to change the designated land uses for the land that will be occupied by the new transportation facility from the existing designations (such as residential, commercial, and industrial) to designations reflecting the transportation facility (such as transportation or public).

Less than Significant with Mitigation (XIII.b and XIII.c)

As discussed in Section 3.4, the MCP project would result in the acquisition of between 36 and 102 homes (total of single-family, multifamily, and mobile homes), depending on the alternative and the design variation, in the cities of Perris and San Jacinto and parts of unincorporated Riverside County. The residents in those homes would be relocated as part of the MCP project. As discussed in Section 3.4, there is sufficient available housing in the cities of Perris and San Jacinto and the surrounding areas in unincorporated Riverside County to accommodate residents displaced from

single-family and multifamily homes. Specifically, considering the abundant housing stock developed in recent years in the MCP study area and planned residential projects in the study area, there is a sufficient number of "comparable replacement dwellings" meeting decent, safe, and sanitary standards in and around the MCP study area. The effects of property acquisition and relocations will be substantially reduced based on compliance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs and as discussed in Measure CC-3**.** As a result, it is anticipated that finding replacement housing for owner- and tenant-occupied single-family and multifamily homes will not present any unusual problems; therefore, those impacts would be reduced to below a level of significance under CEQA based on compliance with the Uniform Act.

The exception is residents displaced from owner-occupied or rental mobile homes. The available inventory for mobile homes for sale or rent in and around the MCP study area is very small. The study area lacks in-kind mobile home replacement housing suitable as decent, safe, and sanitary. Mobile home displacees who cannot be relocated to comparable mobile home housing would be relocated into single-family or multi-family homes, resulting in a housing-of-last-resort entitlement based on compliance with the Uniform Act. "Last Resort Housing" payments by RCTC and the anticipated available suitable single-family or multifamily homes are anticipated to minimize project impacts to displaced owners of, and tenants in, mobile homes, to below a level of significance under CEQA.

Based on the availability of the replacement properties in the cities of Perris and San Jacinto, and in Riverside County, it is not expected that construction of replacement housing will be necessary; should the construction of replacement housing be needed, the Uniform Act proscribes when and how replacement housing would be required and addressed.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The MCP project would result in a less than significant effect related to population growth. No mitigation is required.

- The effects of the MCP project related to property acquisition would be mitigated to below a level of significance based on implementation of Measure CC-3, which requires compliance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs during property acquisition for the project.

XIV. PUBLIC SERVICES: The construction and operation of the MCP project would result in significant effects related to public services if they:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

i) Fire protection

ii) Police protection

iii) Schools

iv) Parks

v) Other public facilities

The information and analyses in this section regarding public services are based on the CIA, and Sections 3.4, Community Impacts, and 3.5, Utilities/Emergency Services. Sections 3.4 and 3.5 describe the public services in the MCP study area, the potential short- and long-term impacts of the MCP project on public services, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to public services.

Existing Conditions

Section 3.4 describes the existing public services in the MCP study area; they are also shown on Figure 3.4.5. Fire prevention and protection services are provided in the unincorporated areas in the MCP study area and the cities of Perris and San Jacinto by the Riverside County Fire Department. Law enforcement services are provided in the unincorporated areas in the MCP study area and the cities of Perris and San Jacinto by the Riverside County Sheriff's Department.

Four public schools are provided and operated by the Nuview Union School District in unincorporated Riverside County in the MCP study area. Eight public schools are provided and operated by the Perris Union High School District and the Val Verde Unified School District in the City of Perris. The San Jacinto School District serves the City of San Jacinto; there are no schools in this School District in the MCP study area.

The parks and recreation resources in the MCP study area are:

- Paragon Park, Morgan Park, Frank Eaton Memorial Park, May Ranch Park, Copper Creek Park, Colonel Lewis Millet Park, and Liberty Park;
- Play and sports fields at Val Verde High School, Val Verde Elementary School, Triple Crown Elementary School, May Ranch Elementary School, Southwest High School, Avalon Elementary School, Lakeside Middle School, Sierra Vista Elementary School, Nuview Elementary School, Mountain Shadows Middle School, Valley View Elementary School, and Nuview Bridge Early College High School;
- On-and off street pedestrian, bike, and equestrian trails designated in the General Plans of the County of Riverside, and the Cities of San Jacinto and Perris.

There is one public library, Nuview Library in the community of Nuevo. There is one post office, at 29245 Lakeview Avenue in the community of Nuevo, in the MCP study area.

The MCP project does not include the construction of any residential or commercial uses, and therefore, would not result in increased population or demand for public services or utilities in the MCP study area. The analysis of impacts on public services and utilities described here focuses on the direct and indirect impacts as a result of construction and operation of the MCP project.

Less than Significant with Mitigation (XIV.a.i and XIV.a.ii)

During operations, the MCP project would have beneficial effects on the ability of the Riverside County Fire Department and the Riverside County Sheriff's Department to provide services to unincorporated County and the Cities of Perris and San Jacinto in the MCP study area. It is anticipated emergency response times would improve, as the ability to move fire protection and emergency service resources from one area to another would be enhanced by the improved transportation network and paved road access to areas not currently accessible to emergency equipment. The new, paved surface of the MCP project may also provide an effective barrier to the spread of wildfires in currently undeveloped areas.

Construction activities, such as temporary road closures, lane closures, or detour routes, could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals within the MCP study area.

The risk of wildfires would increase during construction of the MCP project due to the use of combustion engines in construction equipment, welding equipment, and other sources of combustion.

Non-fire-related medical emergencies could temporarily increase during construction of the MCP project with the presence of construction workers and heavy machinery during construction of the project, due to the risk of construction site accidents.

The potential short-term impacts of the MCP project on police and fire services in the MCP study area would be substantially mitigated, to below a level of significance under CEQA, based on implementation of Measures U&ES-1 through U&ES-7, which provide specific measures for fire protection during construction and operation.

The MCP project would not result in direct or indirect temporary or permanent impacts on police and fire stations in the MCP study area.

No Impact (XIV.a.iii)

The MCP project and its design variations would not result in the acquisition of any land from these two school properties.

Less than Significant with Mitigation (XIV.a.iv)

As discussed in Section 3.1, no parks or other recreational areas would be permanently impacted by the MCP project.

Several recreational trails will be impacted by the MCP project in the cities of Perris and San Jacinto and in unincorporated Riverside County. The MCP project parallel or cross several trails. All existing and planned trails were considered in the design of the MCP project, and provisions were made so that bike routes and trails can use the planned overcrossings and undercrossings to cross the MCP project. After MCP project completion, access to the trails would be restored and trail connectivity on both sides of the new MCP freeway would be provided. The MCP project does not provide dedicated horse trail crossing structures, but any trails crossed by the project will be rerouted to the nearest undercrossing or overcrossing. The existing I-215 railroad overcrossing along Placentia Avenue has a designated equestrian trail on the south side of the bridges. Both of these bridges are being widened as part of the project, and the widened structures will also include a designated equestrian crossing similar to the current crossing on the south side of the existing structures. The design of the project addresses trail connectivity and, therefore, impacts resulting from project implementation to recreational trail users would be reduced. In addition,

Measures LU-6 through LU-12 provide specific measures that would substantially reduce the effects of the MCP project on trails and bicycle facilities during construction and operation of the MCP project, to below a level of significance under CEQA.

No Impact (XIV.a.v)

The MCP project will not result in direct or indirect permanent or temporary impacts on the public library and post office that are in the MCP study area. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The effects of the MCP project related to emergency services during construction would be mitigated to below a level of significance based on implementation of Measures U&ES-1 through U&ES-7 (refer to Section VIII, Hazards and Hazardous Materials, earlier in this chapter, for a description of the requirements of those measures).
- The effects of the MCP project on recreational trails would be mitigated to below a level of significance based on implementation of the following measures:
  - **Measure LU-6:** Requires developing a Pedestrian and Trail Facilities Temporary Closure Plan for addressing the short-term impacts to existing pedestrian facilities and trails crossings or within the construction limits of the project.
  - **Measure LU-7:** Requires developing and providing a detour for each temporary closure of a trail.
  - **Measure LU-8:** Requires developing and providing signage to direct trail users to alternative routes.
  - **Measure LU-9:** Requires providing a contact number and information for trail users regarding upcoming or active trail closures.
  - **Measure LU-10:** Requires ensuring that the access to and connectivity of all recreational trails are restored for all recreational users.
  - **Measure LU-11:** Requires informing the public of permanent trail closures and opportunities for alternative existing trails that are available to maintain trail connectivity.
  - **Measure LU-12:** Requires maintaining trail connectivity within the community.

- The MCP project would not result in the acquisition of land from schools or in direct or indirect effects on a public library and post office. No mitigation is required.

XV. RECREATION: The construction and operation of the MCP project would result in significant effects related to recreation if they:

a) Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

The information and analyses in this section regarding recreation resources are based on the *Final Section 4(f) Evaluation*, the CIA and Sections 3.1, Land Use, and 3.4, Community Impacts. Sections 3.1 and 3.4 describe the parks and trails in the MCP study area, the potential short- and long-term impacts of the MCP project related to those recreation resources, and avoidance, minimization, and mitigation measures to address the adverse impacts of the MCP project related to recreation resources.

Existing Conditions

The parks and recreation resources in the MCP study area are:

- Paragon Park, Morgan Park, Frank Eaton Memorial Park, May Ranch Park, Copper Creek Park, Colonel Lewis Millet Park, and Liberty Park;
- Play and sports fields at Val Verde High School, Val Verde Elementary School, Triple Crown Elementary School, May Ranch Elementary School, Southwest High School, Avalon Elementary School, Lakeside Middle School, Sierra Vista Elementary School, Nuview Elementary School, Mountain Shadows Middle School, Valley View Elementary School, and Nuview Bridge Early College High School;
- San Jacinto Wildlife Area (SJWA); and
- Existing on-and off street pedestrian accessways, and bike and equestrian trails designated in the General Plans of the County of Riverside, and the Cities of San Jacinto and Perris.

These resources are shown on Figures 3.1.3 and 3.1.4 (Liberty Park), and 3.1.5 (Trails) in Section 3.1, Land Use. The other recreation resources listed above are shown on Figure A.1, in Appendix B, Section 4(f) Evaluation.

Less than Significant (XV.a)

The MCP project would reduce travel times and provide improved transportation facilities in western Riverside County, which may contribute to increased use of

recreational facilities in this part of the County. However, the contribution of the MCP project to increased use of recreation facilities is anticipated to be very small, compared to the contribution of new residential uses developed in this area over time. As a result, the MCP project would not contribute to substantial physical deterioration of recreation resources in this part of Riverside County and would not accelerate any deterioration of recreation resources that might occur as a result of increased use of those resources over time. Therefore, the MCP project would result in a less than significant impact under CEQA related to increased use or degradation of existing recreational facilities in this part of western Riverside County. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (XV.b)

The MCP project does not include the construction of any new recreation resources and will not result in the need to expand any existing recreation resources in this part of western Riverside County. The MCP project will result in the following impacts on recreation resources in western Riverside County:

- No parks or other recreational areas would be permanently impacted by the MCP project.
- **Liberty Park:** During construction, the MCP project would result in the temporary use of land in Liberty Park for a temporary construction easement (TCE). The TCE would be approximately 0.10 acre for the preferred alternative. This use would be temporary, would not result in any change in the ownership of the land, and would cease on completion of the project. The area used for the TCE will be restored to its existing or better condition prior to the return of the area occupied by the TCE to the original owner. As a result, the effects of the use of land in Liberty Park by the MCP project would be below a level of significance under CEQA. No avoidance, minimization, or mitigation measures, other than the restoration of the area used by the TCE, would be required for effects of the MCP project as a result of the use of land in Liberty Park for a TCE.
- **Trails:** Several recreational trails in the MCP study area will be impacted by the alignments of the MCP project, which parallel or cross several trails. All existing and planned trails are being considered in the design of the MCP project, and provisions are included in the project design so that bike routes and trails can use the planned overcrossings and undercrossings to cross the MCP facility. After project completion, access to trails would be restored and trail connectivity on both sides of the MCP facility would be provided.

The MCP project does not provide dedicated horse trail crossing structures, but any trails crossed by the project will be rerouted to the nearest undercrossing or overcrossing. The existing I-215 railroad overcrossing along Placentia Avenue has a designated equestrian trail on the south side of the bridges. Both those bridges would be widened as part of the MCP project, and the widened structures will include a designated equestrian crossing similar to the existing equestrian crossing at this location.

The design of the project facilities and implementation of Measure LU-12 ensure long-term trail connectivity along and across the MCP facility. Therefore, the adverse effects of the MCP project on recreational trails and regional trail connectivity would be reduced to below a level of significance under CEQA after mitigation.

Trails may be closed temporarily in the vicinity of the MCP project and detours of the affected trails would be provided during the project construction. Measures LU-6 through LU-12 and Measure TR-1 address short-term impacts related to recreational trails by providing for access across the MCP facility during construction. As a result, the short-term adverse effects of the MCP project on recreational trails would be reduced to below a level of significance under CEQA after mitigation.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above, the effects of the MCP project on recreational trails would be mitigated to below a level of significance based on implementation of the Measures LU-6 through LU-12, described in Section XIV, Public Services, earlier in this chapter. Measure TR-1 (described earlier in Section XIV) would address short-term impacts on those trails during construction of the MCP project, reducing them to below a level of significance.

XVI. TRANSPORTATION/TRAFFIC: The construction and operation of the MCP project would result in significant effects related to transportation/traffic if they:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

e) Result in inadequate emergency access

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

The information and analyses in this section regarding transportation and traffic are based on the *Traffic Technical Report* and Section 3.6, Traffic and Transportation/ Pedestrian and Bicycle Facilities and the *Mid County Parkway Project – Existing plus Project Traffic Analysis* (April 30, 2012). Section 3.6 describes the transportation facilities in the MCP study area, the potential short- and long-term traffic impacts of the MCP project, and avoidance, minimization, and mitigation measures to address the adverse traffic impacts of the MCP project.

Specifically for intersections, the project's traffic contribution would be considered to have a significant impact under CEQA if all of the following are true:

- LOS F traffic conditions are expected with the project;
- The traffic increase caused by the project is 2 percent or more of the traffic entering the intersection in the a.m. or p.m. peak hours; and
- The traffic increase caused by the project is 2 percent or more of the traffic entering the intersection based on ADT conditions.

Specifically for freeway facilities, the project's traffic would be considered to have a significant impact under CEQA if all of the following are true:

- LOS F traffic conditions are expected with the project;
- The expected density (expressed in terms of passenger cars per hour per lane) is higher with the project than without the project; and
- The project would be expected to cause an increase of 723 vehicles per hour or more (this is one third of the typical capacity of one freeway lane).

Existing Conditions

The supplemental Notice of Preparation (NOP) for the project was published in 2007 and existing traffic counts were obtained in year 2010 for the analysis of existing conditions. Thus, year 2010 provided the most accurate database of existing data and was selected as the analysis year for existing traffic conditions. For the traffic analysis, the MCP study area extended from the city of Corona at I-15 in the west to the city of San Jacinto at SR-79 in the east, to ensure that the effects on the regional transportation system were evaluated.

In the MCP traffic study area, I-15 is currently a six-lane freeway from Magnolia Avenue south to Temescal Canyon Road with five interchanges on that freeway segment. The existing average daily traffic on I-15 between Temescal Canyon Road and State Route 91 (SR-91) ranges from 121,000 to 174,000 trips. In the MCP study area, I-215 is currently a six-lane freeway from Van Buren Boulevard to Nuevo Road with four interchanges on that freeway segment. The existing average daily traffic on I-215 from just south of Nuevo Road to Alessandro Boulevard ranges from 99,000 to 124,000 trips. In the MCP study area, SR-79 is currently a conventional two-lane, undivided highway.

The purpose of this section of the CEQA analysis is to provide information regarding the existing (2010) conditions and corresponding impacts and mitigations under existing (2010) plus project conditions. The following tables, provided in Section 3.6, present detailed information on the existing (2010) traffic conditions in the MCP traffic study area:

- **Table 3.6.A** lists a.m. and p.m. peak-hour traffic levels of service (LOS) and density for the I-15 ramps and mainline lanes between Magnolia Avenue and Temescal Canyon Road. As shown, in general, the I-15 ramps and mainline lanes currently operate at LOS E or F during the a.m. peak hour. In the southbound

direction during the p.m. peak hour, all freeway segments currently operate at LOS F.

- **Table 3.6.B** lists a.m. and p.m. peak-hour LOS and average delay for the I-15 ramp intersections and other intersections near the freeway ramps. As shown, in 2010, three intersections in the a.m. peak hours and two intersections in the p.m. hours operated worse than LOS D.
- **Table 3.6.C** lists a.m. and p.m. peak-hour LOS and density for the I-215 ramps and mainline lanes from Alessandro Boulevard to Nuevo Road. As shown, overall the I-215 ramps and mainline lanes operated at LOS D or better during a.m. and p.m. peak hours in 2010 with the exception of the I-215 southbound freeway mainline, which operated at LOS E north of Cajalco Road during the p.m. peak hour.
- **Table 3.6.D** lists the LOS and average delay for the I-215 ramp intersections and other intersections near the freeway ramps. As shown, in 2010, three intersections operated in the a.m. peak hours and one intersection in the p.m. hours operated worse than LOS D.
- **Table 3.6.E** lists the LOS and average delay for the a.m. and p.m. peak hours for Cajalco Road between I-15 and I-215. As shown, in 2010, two intersections operated worse than LOS D during the a.m. and p.m. peak hours.

Bicycle travel is accommodated in the MCP study area on designated bikeways and existing roads. Figure 3.1.5 shows the locations of the bicycle facilities and multipurpose trails in the MCP study area. Pedestrian facilities in the MCP study area include sidewalks, walkways, crosswalks, pedestrian trails, and multipurpose trails.

Emergency services in the MCP study area are described in Section 3.5, Utilities/ Emergency Services.

Less than Significant with Mitigation (XVI.a and XVI.b)

Except where noted below for I-15 and I-215, the freeways, ramps, and intersections in the MCP traffic study area are forecasted to operate at acceptable LOS in the Existing (2010), Opening Year (2020) and the Horizon Year (2040) for all the MCP Build Alternatives and their design variations. An analysis for Existing Plus Project conditions is also provided below.

Existing (2010)

The LOS for the intersections, freeway ramps, and freeway mainline, in the Existing (2010) and Existing (2010) Plus Project conditions are shown in Tables 4.XVI.A, 4.XVI.B, and 4.XVI.C, respectively. CEQA requires analysis of Existing Plus Project traffic conditions although that traffic analysis scenario is not required under NEPA.

The traffic deficiencies in the Existing (2010) Plus Project conditions are:

- Twelve intersections are expected to experience LOS F under Existing (2010) conditions. The MCP project would result in improvements to six of the twelve study area intersections with the exception of the intersections of Cajalco Road/Alexander Street, Cactus Avenue/Innovation Drive, Van Buren Boulevard/ Harmon Street, Van Buren Boulevard/I-215 southbound ramps, Van Buren Boulevard/I-215 northbound ramps and Harley Knox Boulevard/Western Way. Table 4.XVI.A shows a comparison of the Existing and Existing plus Build Alternative (Alternative 9 Modified) LOS. As shown in the table, under CEQA, these six intersections would be significantly impacted by the MCP project in the Existing plus Project (Alternative 9 Modified) conditions. If improvements to those intersections are not made prior to the implementation of the MCP project, implementation of Mitigation Measures TR-3 through TR-8 would provide for traffic signals and/or additional lanes at the impacted intersections that would provide a satisfactory LOS. Therefore, these measures would mitigate the significant impacts at the impacted intersections to below a level of significance under CEQA, as shown in Table 4.XVI.D. However, there is not a substantial increase in LOS or delay with the MCP project compared to the No Build Alternative condition for freeway segments and ramps. Because NEPA does not require analysis of the Existing Plus Project traffic scenario, Measures TR-3 through TR-8 are not required under the NEPA analyses provided in Section 3.6, Traffic and Transportation, and Pedestrian and Bicycle Facilities.
- Freeway segment, weaving segment, and ramp merge/diverge areas on I-215 in the a.m. and p.m. peak hours are all forecast to operate at satisfactory LOS conditions in Existing (2010) under No Build and Build conditions. This is because the MCP project is expected to add traffic to I-215 north of the I-215/ MCP interchange and reduce traffic south of the I-215/MCP interchange, compared to the No Build condition. The MCP project includes the addition of one mainline lane in each direction on I-215 from Nuevo Road to Van Buren Boulevard, which would result in satisfactory operation of that segment of the

Table 4.XVI.A Intersection Peak-Hour Levels of Service for Existing and Existing Plus Project (Preferred Alternative) Conditions

Arterial	Intersection	Existing				Existing Plus Project (Alternative 9 Modified)			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Perris Boulevard	Perris Boulevard and Markham Street	44.3	E	17.8	C				
	Perris Boulevard and Ramona Expressway	35.6	D	36.4	D				
	Perris Boulevard and Dawes Street	3.4	A	3.3	A				
	Perris Boulevard and Morgan Street	-	-	-	-				
Redlands Avenue	Redlands Avenue and Ramona Expressway	-	-	-	-				
Evans Road	Evans Road and Marbella Gate	>80.0	**F**	23.3	C				
	Evans Road and Ramona Expressway	40.3	D	28.5	C				
	Evans Road and Morgan Street	20.1	C	14.9	B				
Bernasconi Road	Bernasconi Road and New Street	-	-	-	-				
	Bernasconi Road and Ramona Expressway	-	-	-	-				
	Bernasconi Road and Orange Avenue	-	-	-	-				
Reservoir Avenue	Reservoir Avenue and Martin Street	-	-	-	-				
	Reservoir Avenue and Ramona Expressway	-	-	-	-				
	Reservoir Avenue and MCP westbound ramps	-	-	-	-				
	Reservoir Avenue and MCP eastbound ramps	-	-	-	-				
	Reservoir Avenue and 9th Street	10.0	B	8.8	A				
Town Center Boulevard	Town Center Boulevard and Frontage Road	-	-	-	-				
	Town Center Boulevard and Ramona Expressway	-	-	-	-				
	Town Center Boulevard and MCP westbound ramps	-	-	-	-				
	Town Center Boulevard and MCP eastbound ramps	-	-	-	-				
	Town Center Boulevard and 5th Street	-	-	-	-				
Park Center Boulevard	Park Center Boulevard and Marvin Road	-	-	-	-				
	Park Center Boulevard and Ramona Expressway	-	-	-	-				
	Park Center Boulevard and MCP westbound ramps	-	-	-	-				
	Park Center Boulevard and MCP eastbound ramps	-	-	-	-				
	Park Center Boulevard and New Street	-	-	-	-				
Warren Road	Warren Road and Ramona Expressway	20.0	B	21.4	C	19.5	C	21.3	C
	Warren Road and Record Road	-	-	-	-				
Gilman Springs Road	Gilman Springs Road and SR-79 southbound ramps	44.5	E	>80.0	**F**	36.2	E	25.2	D
	Gilman Springs Road and SR-79 northbound ramps	49.2	E	>80.0	**F**	25.2	C	34.3	D

Table 4.XVI.A Intersection Peak-Hour Levels of Service for Existing and Existing Plus Project (Preferred Alternative) Conditions

Arterial	Intersection	Existing				Existing Plus Project (Alternative 9 Modified)			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Sanderson Avenue	Sanderson Avenue and Ramona Expressway	36.5	D	33.8	C				
	SR-79 and Sanderson Avenue	-	-	-	-				
	Sanderson Ave and Cottonwood Avenue	12.0	B	11.4	B				
	Sanderson Ave and SR-79 westbound ramps	-	-	-	-				
	Sanderson Ave and SR-79 eastbound ramps	-	-	-	-				
Ramona Expressway	Ramona Expressway and Rider Street	19.7	B	21.5	C				
	Ramona Expressway and Lakeview Avenue	27.2	D	24	C				
	Ramona Expressway and Hansen Avenue	16.6	B	17.5	B				
	Ramona Expressway and Bridge Street	17.0	C	22.9	C				
	Ramona Expressway and SR-79 southbound ramps	-	-	-	-	-	-	-	-
	Ramona Expressway and SR-79 northbound ramps	-	-	-	-	-	-	-	-
	Ramona Expressway and Lyon Avenue	10.8	B	11.2	B	-	-	-	-
	Lyon Avenue and Ramona Expressway	-	-	-	-	21.0	C	18.3	B
	Ramona Expressway and Webster Avenue	20.7	C	21.9	C	16.7	B	17.1	B
Magnolia Avenue	Magnolia Avenue and El Sobrante Road	45.1	D	54.7	D				
	Magnolia Avenue and I-15 southbound ramps	>80.0	**F**	73.1	E				
	Magnolia Avenue and I-15 northbound ramps	20.3	C	12.4	B				
	Magnolia Avenue and El Camino Avenue	13.3	B	14.7	B				
Ontario Avenue	Ontario Avenue and California Avenue	25.5	C	34.2	C				
	Ontario Avenue and I-15 southbound ramps	23.4	C	18.0	B				
	Ontario Avenue and I-15 northbound ramps	36.2	D	28.1	C				
	Ontario Avenue and State Street	44.8	E	46.8	E				
El Cerrito Road	El Cerrito Road and Bedford Canyon Road	15.3	B	18.3	B				
	El Cerrito Road and I-15 southbound ramps	10.6	B	6.5	A				
	El Cerrito Road and I-15 northbound ramps	35.1	D	25.4	C				
	El Cerrito Road and Temescal Canyon Road	49.7	E	27.7	D				

Table 4.XVI.A Intersection Peak-Hour Levels of Service for Existing and Existing Plus Project (Preferred Alternative) Conditions

Arterial	Intersection	Existing				Existing Plus Project (Alternative 9 Modified)			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Cajalco Road	Cajalco Road and Bedford Canyon Road	7.1	A	13.2	B	14.8	B	20.2	C
	Cajalco Road and I-15 southbound ramps	22.4	C	27.3	C	22.5	C	26.3	C
	Cajalco Road and I-15 northbound ramps	17.5	B	15.6	B	18.2	B	15.3	B
	Cajalco Road and Temescal Canyon Road	28.1	C	27.5	C	28.2	C	27.6	C
	Eagle Valley Road and Cajalco Road	13.2	B	12.6	B	-	-	-	-
	Cajalco Road and Eagle Valley Road	-	-	-	-	13.5	B	12.9	B
	Cajalco Road and La Sierra Avenue	16.3	B	14.7	B	15.8	B	14.2	B
	Cajalco Road and Lake Matthews Road	15.1	C	12.9	B	15.9	C	13.4	B
	Cajalco Road and El Sobrante Road	11.0	B	20.2	C	11.3	B	21.0	C
	Cajalco Road and Gavilan Road	10.5	B	14.6	B	10.4	B	15.0	B
	Cajalco Road and Harley John Road	25.9	C	25.5	C	29.5	C	26.2	C
	Cajalco Road and Wood Road	21.8	C	13.8	B	21.8	C	13.8	B
	Cajalco Road and Alexander Street	>80.0	**F**	72.8	**F**	>80.0	**F**	>80.0	**F**
	Cajalco Road and Clark Street	35.6	D	26.0	C	35.8	D	26.7	C
	Cajalco Road and Seaton Avenue	>50.0	**F**	>50.0	**F**				
	Cajalco Road and Harvill Avenue	22.1	C	23.8	C	20.2	C	21.6	C
	Cajalco Road and I-215 southbound ramps	31.0	C	50.9	D	23.6	C	33.6	C
	Cajalco Road and I-215 northbound ramps	22.6	C	17.0	B	21.9	C	15.9	B
	Cajalco Road and Webster Avenue	-	-	-	-				
Weirick Road	Weirick Road and Knabe Road	10.4	B	13.2	B				
	Weirick Road and I-15 southbound ramps	12.5	B	15.1	B				
	Weirick Road and I-15 northbound ramps	16.3	B	17.2	B				
	Weirick Road and Temescal Canyon Road	12.4	B	11.8	B				
Temescal Canyon Road	Temescal Canyon Road and Lawson Drive	17.8	C	18.0	C				
	Temescal Canyon Road and I-15 southbound ramps	12.4	B	15.9	B				
	Temescal Canyon Road and I-15 northbound ramps	32.7	C	27.5	C				
Alessandro Boulevard	Alessandro Boulevard and Meridian Parkway	19	B	11.1	B	15.5	B	11.2	B
	Alessandro Boulevard and I-215 southbound ramps	10.1	B	10.2	B	11.3	B	11.7	B
	Alessandro Boulevard and I-215 northbound ramps	24.8	C	23.2	C	27.5	C	24.1	C
	Alessandro Boulevard and Valley Springs Parkway	9.4	A	10.4	B	8.9	A	10.4	B

Table 4.XVI.A Intersection Peak-Hour Levels of Service for Existing and Existing Plus Project (Preferred Alternative) Conditions

Arterial	Intersection	Existing				Existing Plus Project (Alternative 9 Modified)			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Cactus Avenue	Cactus Avenue and Innovation Drive	19.5	C	12.8	B	>80.0	**F**	38.3	E
	Cactus Avenue and I-215 southbound ramps	11.7	B	22.1	C	13.6	B	19.6	B
	Cactus Avenue and I-215 northbound ramps	10.2	B	3	A	9.5	A	3.0	A
	Cactus Avenue and Ellsworth Street	27	C	47.4	D	21.7	C	36.9	D
Van Buren Boulevard	Van Buren Boulevard and Harmon Street	13.6	B	25.9	C	>80.0	**F**	43.4	D
	Van Buren Boulevard and Meridian Parkway	-	-	-	-				
	Van Buren Boulevard and I-215 southbound ramps	>50.0	**F**	>50.0	**F**	>80.0	**F**	>80.0	**F**
	Van Buren Boulevard and I-215 northbound ramps	76.1	E	22.0	C	>80.0	**F**	37.4	D
Harley Knox Boulevard	Harley Knox Boulevard and Harvill Avenue	9.9	A	12.0	B	8.2	A	9.1	A
	Harley Knox Boulevard and I-215 southbound ramps	26.6	C	28.5	C	28.4	C	26.7	C
	Harley Knox Boulevard and I-215 northbound ramps	12.1	B	9.2	A	12.1	B	10.1	A
	Harley Knox Boulevard and Western Way	10.8	B	10.4	B	>80.0	**F**	>80.0	**F**
Placentia Avenue	Placentia Avenue and Harvill Avenue	15.4	C	24.6	C	13.8	B	20.8	C
	Placentia Avenue and I-215 southbound ramps	-	-	-	-	-	-	-	-
	Placentia Avenue and I-215 northbound ramps	-	-	-	-	-	-	-	-
	Placentia Avenue and East Frontage Road	9.1	A	10.1	B	7.7	A	8.7	A
Nuevo Road	Nuevo Road and A Street	39.2	E	27.2	D				
	Nuevo Road and I-215 southbound ramps	29.3	C	38.2	D				
	Nuevo Road and I-215 northbound ramps	11.9	B	17.7	B				
	Nuevo Road and Old Nuevo Road	15.7	B	13.6	B				

Source: *Mid County Parkway Traffic Technical Report* (February 3, 2011); and *Mid County Parkway Project - Existing Plus Project Traffic Analysis Memorandum* (April 30, 2012).
Note: Black box represents an intersection with a significant impact. **Bold** represents a deficient (LOS F) intersection.
>80" – Exceeds 80 seconds (LOS Threshold for Signalized Intersection)
>50" – Exceeds 50 seconds (LOS Threshold for Unsignalized Intersection)
I-15 = Interstate 15
I-215 = Interstate 215
LOS = Level of Service
MCP = Mid County Parkway
sec = seconds
SR-79 = State Route 79

Table 4.XVI.B Existing (2010) and Existing Plus Project (Preferred Alternative) Freeway Mainline Peak Hour Level of Service

Fwy	Dir	Segment	Lane Type	Existing (2010)				Existing (2010) Plus Project (Alternative 9 Modified)			
				AM Peak hour		PM Peak Hour		AM Peak hour		PM Peak Hour	
				Density	LOS	Density	LOS	Density	LOS	Density	LOS
Interstate - 15	Northbound	South of Temescal Canyon Road	General Purpose	33.8	D	30.5	D	33.8	D	30.5	D
		Temescal Canyon Road to Weirick Road		29.4	D	33.1	D	29.4	D	33.1	D
		Weirick Road to Cajalco Road		37.4	E	38.2	E	37.4	E	38.2	E
		Cajalco Road to El Cerrito Road		47.4	**F**	41.6	E	47.6	**F**	41.9	E
		El Cerrito Road to Ontario Avenue		49.6	**F**	42.8	E	49.7	**F**	43.1	E
		Ontario Avenue to Magnolia Avenue		49.3	**F**	47.6	**F**	49.5	**F**	47.7	**F**
		Magnolia Avenue to SR-91		29.3	D	36.6	E	29.4	D	36.7	E
	Southbound	SR-91 to Magnolia Avenue	General Purpose	-	-	-	-	36.6	E	42.1	E
		Magnolia Avenue to Ontario Avenue		42.9	E	53.2	**F**	43.2	E	53.4	**F**
		Ontario Avenue to El Cerrito Road		33.5	D	52.9	**F**	33.7	D	43.1	**F**
		El Cerrito Road to Cajalco Road		33.3	D	53.4	**F**	33.4	D	53.5	**F**
		Cajalco Road to Weirick Road		30.7	D	52.3	**F**	30.7	D	52.3	**F**
		Weirick Road to Temescal Canyon Road		27.7	D	48.4	**F**	27.7	D	48.4	**F**
		South of Temescal Canyon Road		26.4	D	47.1	**F**	26.4	D	47.1	**F**
Interstate - 215	Northbound	Nuevo Road on-ramp to Placentia Avenue off-ramp	General Purpose	-	-	-	-	-	-	-	-
		Nuevo Road on-ramp to Ramona Expressway off-ramp		25.7	C	25.2	C	-	-	-	-
		Nuevo Road on-ramp to Mid County Parkway EB off-ramp		-	-	-	-	18.8	C	18.4	C
		Placentia Avenue off-ramp to Mid County Parkway EB off-ramp		-	-	-	-	23.5	C	22.2	C
		Placentia Avenue on-ramp to Ramona Expressway off-ramp		-	-	-	-	-	-	-	-
		Mid County Parkway EB off-ramp to Ramona Expressway off-ramp		-	-	-	-	-	-	-	-
		Mid County Parkway EB off-ramp to Placentia Avenue off-ramp		-	-	-	-	36.7	D	34.2	D
		Ramona Expressway on-ramp to Mid County Parkway WB on-ramp		-	-	-	-	-	-	-	-
		Ramona Expressway on-ramp to Harley Knox Boulevard off-ramp		30.3	D	27.4	D	24.3	C	21.1	C
		Mid County Parkway WB on-ramp to Ramona Expressway on-ramp		-	-	-	-	-	-	-	-
		Mid County Parkway WB on-ramp to Ramona Expressway off-ramp		-	-	-	-	33.8	D	30.5	D
		Mid County Parkway WB On to Harley Knox Boulevard off-ramp		-	-	-	-	-	-	-	-
		Harley Knox Boulevard on-ramp to Van Buren off-ramp		32.1	D	28.7	D	25.1	C	21.9	C
		Van Buren Boulevard on-ramp to Cactus Avenue off-ramp		30.7	D	30.4	D	36.2	E	32.9	D
		Cactus Avenue on-ramp to Alessandro Boulevard off-ramp		29.6	D	33.4	D	34.7	D	36.6	E
		North of Alessandro Boulevard		26.1	D	34.9	D	29.9	D	38.3	E
	Southbound	North of Alessandro Boulevard	General Purpose	29.5	D	40	E	34.3	D	35.6	D
		Alessandro Boulevard on-ramp to Cactus Avenue off-ramp		28.8	D	40.2	E	31.3	D	33.8	D
		Cactus Avenue on-ramp to Van Buren Boulevard off-ramp		27.1	D	38.7	E	36.7	D	34.2	D
		Van Buren Boulevard on-ramp to Harley Knox Boulevard off-ramp		25.1	C	39.6	E	33.8	D	30.5	D
		Harley Knox Boulevard on-ramp to Cajalco Road off-ramp		24.1	C	35.7	E	26.8	D	29.1	D

Table 4.XVI.B Existing (2010) and Existing Plus Project (Preferred Alternative) Freeway Mainline Peak Hour Level of Service

Fwy	Dir	Segment	Lane Type	Existing (2010)				Existing (2010) Plus Project (Alternative 9 Modified)			
				AM Peak hour		PM Peak Hour		AM Peak hour		PM Peak Hour	
				Density	LOS	Density	LOS	Density	LOS	Density	LOS
		Mid County Parkway EB off-ramp to Cajalco Road off-ramp		-	-	-	-	-	-	-	-
		Cajalco Road on-ramp to Mid County Parkway WB on-ramp		-	-	-	-	-	-	-	-
		Cajalco Road on-ramp to Mid County Parkway EB off-ramp		-	-	-	-	21.1	C	34.5	D
		Mid County Parkway EB off-ramp to Placentia Avenue off-ramp		-	-	-	-	16.6	B	25.8	C
		Mid County Parkway WB on-ramp to Nuevo Road off-ramp		-	-	-	-	17.5	B	25.6	C
		Cajalco Road on-ramp to Placentia Avenue off-ramp		-	-	-	-	-	-	-	-
		Placentia Avenue off-ramp to Placentia Avenue on-ramp		-	-	-	-	19.3	C	31.8	D
		Placentia Avenue on-ramp to Mid County Parkway WB on-ramp		-	-	-		22.4	C	21.1	C

Source: *Mid County Parkway Traffic Technical Report* (February 3, 2012); and *Mid County Parkway Project - Existing Plus Project Traffic Analysis Memorandum* (June 6, 2012).
Note: **Bold** represents a deficient (LOS F) segment.
- = Not Applicable
Dir = Direction
Fwy = Freeway
HOV = High Occupancy Vehicle
I-15 = Interstate 15
I-215 = Interstate 215
LOS = Level of Service
MCP = Mid County Parkway
SR-79 = State Route 79

Table 4.XVI.C Existing (2010) Plus Project Freeway Ramps Peak-Hour LOS

	2010 No Build								2010 Alternative 9 Modified							
	Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour			Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour		
			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS
I-215	**D Street and I-215**								**D Street and I-215**							
	Northbound Nuevo to D Street	Weave	4308	-	C	4440	-	C	NB Nuevo to D Street	Weave	4308	-	D	4440	-	D
	Southbound Nuevo to D Street	Weave	4051	-	C	4941	-	D	SB Nuevo to D Street	Weave	3641	-	D	3819	-	D
	Nuevo Road and I-215								**Nuevo Road and I-215**							
	Nuevo NB off-ramp	Diverge	4308	444	C	4440	425	C	Nuevo NB off-ramp	Diverge	4308	444	B	4440	425	B
	Nuevo NB on-ramp	Merge	3864	695	C	4015	461	C	Nuevo NB on-ramp	Merge	3864	695	C	4015	461	C
	Nuevo SB off-ramp	Diverge	4045	345	C	5334	861	D	Nuevo SB off-ramp	Diverge	3635	345	B	4212	861	C
	Nuevo SB on-ramp	Merge	3700	351	C	4473	468	D	Nuevo SB on-ramp	Merge	3290	351	D	3351	468	D
	MCP and I-215								**MCP and I-215**							
	I-215 NB - MCP EB off-ramp	Diverge	-	-	-	-	-	-	I-215 NB - MCP EB off-ramp	Diverge	4559	372	D	4476	513	D
	MCP WB - I-215 NB on-ramp	Merge	-	-	-	-	-	-	MCP WB - I-215 NB on-ramp	Merge	4353	1119	D	3998	1030	C
	I-215 SB - MCP EB off-ramp	Diverge	-	-	-	-	-	-	I-215 SB - MCP EB off-ramp	Diverge	4045	822	C	5334	1353	D
	MCP WB - I-215 SB on-ramp	Merge	-	-	-	-	-	-	MCP WB - I-215 SB on-ramp	Merge	3179	456	B	3793	419	C
	Placentia Avenue and I-215								**Placentia Avenue and I-215**							
	Placentia On - Ramona Off	Weave	-	-	-	-	-	-	Placentia On - Ramona Off	Weave	-	-	-	-	-	-
	Placentia NB off-ramp	Diverge	-	-	-	-	-	-	Placentia NB off-ramp	Diverge	4187	259	D	3963	356	D
	Placentia NB on-ramp	Merge	-	-	-	-	-	-	Placentia NB on-ramp	Merge	3928	425	D	3607	391	D
	Placentia SB off-ramp	Diverge	-	-	-	-	-	-	Placentia SB off-ramp	Diverge	3212	350	B	3981	478	D
	Placentia SB on-ramp	Merge	-	-	-	-	-		Placentia SB on-ramp	Merge	2862	316	C	3503	290	D
	Cajalco Road/Ramona Expressway and I-215								**Cajalco Road/Ramona Expressway and I-215**							
	Ramona NB off-ramp	Diverge	4559	551	C	4476	555	C	Ramona NB off-ramp	Diverge	5472	491	B	5028	491	B
	Ramona NB on-ramp	Merge	4008	1230	D	3921	909	D	Ramona NB on-ramp	Merge	4781	1077	C	4537	791	C
	Cajalco SB off-ramp	Diverge	4286	714	C	5818	1003	D	Cajalco SB off-ramp	Diverge	4184	628	D	5687	881	D
	Cajalco SB on-ramp	Merge	3572	473	C	4815	519	D	Cajalco SB on-ramp	Merge	3556	489	C	4806	528	D

Table 4.XVI.C Existing (2010) Plus Project Freeway Ramps Peak-Hour LOS

	2010 No Build								2010 Alternative 9 Modified							
	Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour			Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour		
			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS
	Harley Knox Boulevard and I-215								**Harley Knox Boulevard and I-215**							
	Harley Knox NB off-ramp	Diverge	5238	94	D	4830	91	D	Harley Knox NB off-ramp	Diverge	5858	93	D	4337	90	D
	Harley Knox NB on-ramp	Merge	5144	312	D	4739	283	D	Harley Knox NB on-ramp	Merge	5765	298	C	5038	274	C
	Harley Knox SB off-ramp	Diverge	4464	262	C	6138	416	D	Harley Knox SB off-ramp	Diverge	4357	255	D	6003	403	D
	Harley Knox SB on-ramp	Merge	4202	84	C	5722	96	D	Harley Knox SB on-ramp	Merge	4102	82	C	5600	87	C
	Van Buren Boulevard and I-215								**Van Buren Boulevard and I-215**							
	Van Buren NB off-ramp	Diverge	5456	819	D	5022	495	D	Van Buren NB off-ramp	Diverge	6163	878	C	5312	531	B
	Van Buren NB on-ramp	Merge	4637	645	D	4527	720	D	Van Buren EB-NB on-ramp	Merge	5185	542	D	4781	608	D
	Van Buren WB-NB on-ramp	Merge	-	-	-	-	-	-	Van Buren WB-NB on-ramp	Merge	5727	136	D	5389	153	D
	Van Buren SB off-ramp	Diverge	4786	811	D	6074	651	D	Van Buren SB off-ramp	Diverge	4702	871	D	5931	691	D
	Van Buren SB on-ramp	Merge	3975	489	C	5423	715	E	Van Buren SB on-ramp	Merge	3831	526	D	5240	763	D
I-215	**Cactus Avenue and I-215**								**Cactus Avenue and I-215**							
	Cactus NB off-ramp	Diverge	5282	872	D	5247	503	D	Cactus NB off-ramp	Diverge	5863	904	D	5542	518	D
	Cactus NB on-ramp	Merge	4410	741	D	4744	854	D	Cactus EB-NB on-ramp	Merge	4959	79	C	5024	91	C
	Cactus WB-NB on-ramp	Merge	-	-	-	-	-	-	Cactus WB-NB on-ramp	Merge	5038	688	D	5115	784	D
	Cactus SB-WB off-ramp	Diverge	-	-	-	-	-	-	Cactus SB-WB off-ramp	Diverge	4967	153	D	6035	63	D
	Cactus SB-EB off-ramp	Diverge	5040	623	D	6179	771	D	Cactus SB-EB off-ramp	Diverge	4814	492	D	5972	730	D
	Cactus SB on-ramp	Merge	4417	369	C	5408	666	D	Cactus SB on-ramp	Merge	4322	380	D	5242	689	D
	Alessandro Boulevard and I-215								**Alessandro Boulevard and I-215**							
	Alessando NB off-ramp	Diverge	5151	826	D	5598	516	D	Alessando NB off-ramp	Diverge	5726	856	D	5899	533	D
	Alessando NB on-ramp	Merge	4325	306	C	5082	661	D	Alessando NB on-ramp	Merge	4870	312	D	5366	676	D
	Alessandro SB off-ramp	Diverge	5134	415	D	6168	655	D	Alessandro SB off-ramp	Diverge	5061	426	D	6018	671	D
	Alessandro SB on-ramp	Merge	4719	321	D	5513	666	E	Alessandro EB-SB on-ramp	Merge	4736	231	D	5542	493	D
	Alessandro WB-SB on-ramp	Merge	-	-	-	-	-	-	Alessandro WB-SB on-ramp	Merge	4635	101	D	5347	195	D

Table 4.XVI.C Existing (2010) Plus Project Freeway Ramps Peak-Hour LOS

	2010 No Build								2010 Alternative 9 Modified							
	Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour			Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour		
			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS
I-15	**Temescal Canyon Road and I-15**								**Temescal Canyon Road and I-15**							
	Temescal NB off-ramp	Diverge	5635	849	D	5264	131	D	Temescal NB off-ramp	Diverge	5635	849	D	5264	131	D
	Temescal NB on-ramp	Merge	4786	325	D	5133	426	D	Temescal NB on-ramp	Merge	4786	325	D	5133	426	D
	Temescal SB off-ramp	Diverge	4882	288	D	6955	430	**F**	Temescal SB off-ramp	Diverge	4882	288	D	6955	430	**F**
	Temescal SB on-ramp	Merge	4594	80	C	6525	243	**F**	Temescal SB on-ramp	Merge	4594	80	C	6525	243	**F**
	Weirick Road and I-15								**Weirick Road and I-15**							
	Weirick NB off-ramp	Diverge	5111	137	D	5559	88	D	Weirick NB off-ramp	Diverge	5111	137	D	5559	88	D
	Weirick NB on-ramp	Merge	4974	990	E	5471	559	D	Weirick NB on-ramp	Merge	4974	990	E	5471	559	D
	Weirick SB off-ramp	Diverge	5291	458	D	7519	715	**F**	Weirick SB off-ramp	Diverge	5291	458	D	7519	715	**F**
	Weirick SB on-ramp	Merge	4833	49	C	6804	151	**F**	Weirick SB on-ramp	Merge	4833	49	C	6804	151	**F**
	Cajalco Road and I-15								**Cajalco Road and I-15**							
	Cajalco NB off-ramp	Diverge	5964	157	**D**	6030	335	**D**	Cajalco NB off-ramp	Diverge	5964	157	**D**	6030	335	**D**
	Cajalco NB on-ramp	Merge	5807	1013	**F**	5695	583	E	Cajalco NB on-ramp	Merge	5807	1031	**F**	5695	600	E
	Cajalco SB off-ramp	Diverge	5580	457	**D**	7673	597	**F**	Cajalco SB off-ramp	Diverge	5599	495	**D**	7695	641	**F**
	Cajalco SB on-ramp	Merge	5123	168	D	7076	443	**F**	Cajalco SB on-ramp	Merge	5123	168	D	7076	443	**F**
	El Cerrito Road and I-15								**El Cerrito Road and I-15**							
	El Cerrito NB off-ramp	Diverge	6820	393	**F**	6278	190	**D**	El Cerrito NB off-ramp	Diverge	6838	393	**F**	6295	190	D
	El Cerrito NB on-ramp	Merge	6427	703	**F**	6088	264	D	El Cerrito NB on-ramp	Merge	6445	703	**F**	6105	264	D
	El Cerrito SB off-ramp	Diverge	5603	305	D	7607	510	**F**	El Cerrito SB off-ramp	Diverge	5622	305	D	7629	510	**F**
	El Cerrito SB on-ramp	Merge	5298	282	D	7097	576	**F**	El Cerrito SB on-ramp	Merge	5317	282	D	7119	576	**F**
	Ontario Road and I-15								**Ontario Road and I-15**							
	Ontario NB off-ramp	Diverge	7130	970	**F**	6352	470	E	Ontario NB off-ramp	Diverge	7148	970	**F**	6369	470	E
	Ontario NB on-ramp	Merge	6160	935	**F**	5882	960	**F**	Ontario NB on-ramp	Merge	6178	935	**F**	5899	960	**F**

Table 4.XVI.C Existing (2010) Plus Project Freeway Ramps Peak-Hour LOS

	2010 No Build								2010 Alternative 9 Modified							
	Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour			Ramp	Type of Analysis	AM Peak Hour			PM Peak Hour		
			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS			Mainline Volume	Ramp Volume	LOS	Mainline Volume	Ramp Volume	LOS
I-15	Ontario SB off-ramp	Diverge	6356	1110	**E**	7656	812	**F**	Ontario SB off-ramp	Diverge	6375	1110	**E**	7658	812	**F**
	Ontario SB on-ramp	Merge	5246	357	D	6844	763	**F**	Ontario SB on-ramp	Merge	5265	357	D	6866	763	**F**
	Magnolia Avenue and I-15								**Magnolia Avenue and I-15**							
	Magnolia NB off-ramp	Diverge	7095	1078	**F**	6842	469	**F**	Magnolia NB off-ramp	Diverge	7113	1078	**F**	6859	469	**F**
	Magnolia NB on-ramp	Merge	6017	883	**F**	6373	1555	**F**	Magnolia NB on-ramp	Merge	6035	883	**F**	6390	1555	**F**
	Magnolia SB off-ramp	Diverge	7911	1888	**F**	8440	1401	**F**	Magnolia SB off-ramp	Diverge	7930	1888	**F**	8462	1401	**F**
	Magnolia SB on-ramp	Merge	6023	333	E	7039	617	**F**	Magnolia SB on-ramp	Merge	6042	333	E	7061	617	**F**

Source: *Mid County Parkway Traffic Technical Report* (February 3, 2012); and *Mid County Parkway Project - Existing Plus Project Traffic Analysis Memorandum* (June 6, 2012).
Note: Black box represents a deficient segment with an impact. **Bold** represents a deficient (LOS F) ramp.
EB = Eastbound
HOV = High Occupancy Vehicle
I-15 = Interstate 15
I-215 = Interstate 215
LOS = Level of Service
MCP = Mid County Parkway
NB = Northbound
SB = Southbound
SR-79 = State Route 79
WB = Westbound
- = Not Applicable

Table 4.XVI.D Intersection Peak-Hour Levels of Service for Existing Plus Project (Preferred Alternative) Conditions With Mitigation

Arterial	Intersection	Existing Plus Project With Mitigation (Alternative 9 Modified)			
		AM Peak		PM Peak	
		Delay (sec)	LOS	Delay (sec)	LOS
Cajalco Road	Cajalco Road and Alexander Street[1]	27.9	C	55.9	E
Cactus Avenue	Cactus Avenue and Innovation Drive[2]	15.2	B	18.0	B
Van Buren Boulevard	Van Buren Boulevard and Harmon Street[3]	66.6	E	42.1	D
	Van Buren Boulevard and I-215 southbound ramps[4]	49.4	D	13.8	B
Harley Knox Boulevard	Harley Knox Boulevard and Western Way[5]	11.6	B	20.4	B

Source: *Mid County Parkway Project - Existing Plus Project Traffic Analysis Memorandum* (June 6, 2012).
Notes:
[1] Measure TR-3
[2] Measure TR-4
[3] Measure TR+5
[4] Measure TR-6
[5] Measure TR-7
>80 – Exceeds 80 seconds (LOS Threshold for Signalized Intersection)
>50 – Exceeds 50 seconds (LOS Threshold for Unsignalized Intersection)
I-15 = Interstate 15
I-215 = Interstate 215
LOS = Level of Service
MCP = Mid County Parkway
sec = seconds
SR-79 = State Route 79

freeway mainline. The traffic volume from the MCP project added to I-215 would be accommodated by the additional freeway mainline lanes, and traffic conditions in the Build Alternatives, along I-215 from Nuevo Road to Van Buren Boulevard, are better than in the No Build Alternative.

As noted above, if the MCP project is implemented before other improvements are made to the six locations described in Table 4.XVI.D, the MCP project would include implementation of the following measures to mitigate significant project impacts if the project were constructed and no additional roadway improvements were constructed at those locations prior to the MCP project opening. If the impacted locations are not improved from the existing condition prior to the construction of the MCP project, then the following mitigation measures shall be implemented. The resulting LOS at those locations with these mitigation measures would meet the threshold for acceptable traffic operations as shown in Table 4.XVI.D.

Mitigation Measure TR-3: Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Cajalco Road/Alexander Street shall be improved to provide a traffic signal, an eastbound left-turn lane and a westbound left-turn lane.

Mitigation Measure TR-4: Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Cactus Avenue and Innovation Drive shall be improved to provide three eastbound through lanes and three westbound through lanes.

Mitigation Measure TR-5: Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Van Buren Boulevard/Harmon Street shall be improved to add a westbound right-turn lane, a southbound right-turn lane, and a southbound left-turn lane.

Mitigation Measure TR-6: Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Van Buren Boulevard/I-215 southbound ramps shall be improved to add a traffic signal, two eastbound through lanes and two westbound through lanes.

Mitigation Measure TR-7: Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Harley Knox Boulevard/Western Way shall be improved to add a traffic signal and add an eastbound left-turn lane.

The Recirculated Draft EIR/Supplemental Draft EIS included the following measure (originally numbered TR-7): "Prior to opening of the MCP project, if not already improved from the existing (2010) condition, the intersection of Van Buren Boulevard/I-215 northbound ramps shall be improved to provide two northbound left-turn lanes, two eastbound through lanes, and two westbound through lanes." However, since the circulation of the Recirculated Draft EIR/Supplemental Draft EIS, the improvements cited in that measure were constructed as part of the completely

I-215/Van Buren Boulevard interchange improvements. As a result, original Measure TR-7 is no longer required as a measure for the MCP project. Therefore, that measure was deleted from this section and from the Environmental Commitments Record in Appendix F and Original Measure TR-8 was renumbered as Measure TR-7 as shown above.

Project Opening Year (2020)

The LOS for the freeway ramps, freeway mainline, and intersections in the Opening Year (2020) No Build and Build conditions are shown in Tables 3.6.G, 3.6.H, and 3.6.I, respectively, in Section 3.6. The traffic deficiencies in the Opening Year (2020) are:

- The I-15/Magnolia Avenue and the Magnolia Avenue/El Sobrante Road intersections are forecast to experience unsatisfactory LOS conditions in 2020 for the No Build and Build Alternatives although the traffic levels for the MCP project are not substantially higher than traffic levels for the No Build Alternative. Therefore, there are no adverse traffic conditions caused by the MCP project at this location.
- Freeway segment, weaving segment, and ramp merge/diverge areas on I-215 in the a.m. and p.m. peak hours are forecast to operate at LOS E and F conditions in 2020 under No Build and Build conditions. The MCP project is expected to add traffic to I-215 north of the I-215/MCP interchange and reduce traffic south of the I-215/MCP interchange, compared to the No Build condition.

However, the MCP project includes the addition of one mainline lane in each direction on I-215 from Nuevo Road to Van Buren Boulevard, which would result in satisfactory operation of that segment of the freeway mainline. The project traffic volume added to I-215 under the MCP project would be accommodated by the additional freeway mainline lanes, and traffic conditions in the MCP project, along I-215 from Nuevo Road to Van Buren Boulevard, are better than in the No Build Alternative.

- Seven intersections are expected to experience LOS E or F under the No Build Alternatives in 2020. The MCP project would result in improvement to all study area intersections except the intersections of Magnolia Avenue/El Sobrante Road, Magnolia Avenue/I-15 southbound ramp, and Alessandro Boulevard/Meridian Parkway. Traffic levels for the MCP Project are not substantially higher than

traffic levels for the No Build Alternatives at these locations. Therefore, there are no adverse traffic conditions caused by the project at these intersections.

2040 Horizon Year Conditions

The LOS for freeway, ramps, mainline, and intersections in the Horizon Year (2040) No Build and Build Alternatives are shown in Tables 3.6.J, 3.6.K, and 3.6.L, respectively, in Section 3.6. The traffic deficiencies in the Horizon Year (2040) are:

- The study area interchanges on I-215 are expected to experience unsatisfactory LOS conditions in 2040 for the No Build Alternatives and the MCP project. Traffic volumes for the MCP project are not substantially higher than for the No Build Alternatives. Therefore, there are no adverse traffic impacts caused by the MCP project at these locations. In the No Build Alternatives, all the freeway interchanges, except the D Street interchange, would have one or more ramps operating at LOS F. Alternative 9 Modified would have the greatest improvement in interchange operation by improving the interchanges at MCP/Placentia Avenue and Cajalco Road/Ramona Expressway.
- The freeway segments on I-15 between SR-91 and Temescal Canyon Road are forecast to operate at LOS F in the No Build condition and the MCP project.
- Segments of I-215 north of MCP would operate at LOS F in the No Build Alternative and the MCP project. The MCP project is forecast to add traffic to I-215 north of the I-215/MCP interchange and reduce traffic south of the I-215/ MCP interchange, compared to the No Build Alternatives.
- The intersections of Magnolia Avenue/El Sobrante Road, I-15 southbound ramps/El Camino Avenue; Alessandro Boulevard/Meridian Parkway, Alessandro Boulevard/I-215 southbound ramps, Alessandro Boulevard/I-215 northbound ramps, Alessandro Boulevard/Old I-215, and Cajalco Road/Temescal Canyon Road intersections are forecast to experience unsatisfactory LOS conditions under the No Build and Build conditions in 2040. However, traffic levels for the MCP project are not substantially higher than for the No Build Alternatives. Therefore, there are no adverse traffic conditions caused by the MCP project at these locations.
- The Van Buren Boulevard/Meridian Parkway intersection is forecast to operate at unsatisfactory LOS E in the No Build condition in 2040. For the MCP project (Alternative 9 Modified and its design variations), the intersection would operate at LOS E. However, there is not a substantial increase in LOS or delay with the MCP project compared to the No Build Condition.

Local Circulation and Access

Local circulation will be permanently impacted by the MCP project. Attachment G in Appendix I, Supplemental Chapter 2 Attachments, lists the types of local road modifications included in the MCP project. The road modifications mostly include cul-de-sacs of existing through streets, widening and/or realigning of local streets, some road closures, and realigning interchanges. These roadway modifications may cause redistribution of traffic within the study area. The redistribution of traffic is evaluated in the analyses of the MCP project.

In summary, the MCP project would result in some improvements in traffic conditions in 2020 and 2040 or no substantial change compared to the No Build condition. The MCP project would result in traffic conditions slightly worse than the No Build condition at only a few intersections in 2020 and 2040. The MCP project is consistent with the applicable transportation plans as discussed in Section 3.1 and generally meets or exceeds the LOS standards set by Riverside County and the cities of Perris and San Jacinto, except at those locations where those standards are also exceeded by the No Build condition. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (XVI.c)

The MCP study area is approximately 2.0 miles north of Perris Valley Airport, 10.3 miles south of Riverside Municipal Airport, and 0.2 mile south of the March JPA Airport at the March Air Reserve Base. The MCP/I-215 interchange in the city of Perris will be between 75 ft and 100 ft high and will be subject to airspace review during final design. By conducting this airspace review based upon more detailed engineering that would be conducted during final design, implementation of Measure LU-4 would reduce the impacts of the MCP project related to any hazard or risk associated with operations at the March Air Reserve Base to below a level of significance under CEQA.

No Impact (XVI.d)

All the structures and features included in the MCP project would be designed and constructed in compliance with Caltrans Standard Construction Specifications. As described in Section 3.3, existing farm access routes that currently cross the alignment of the MCP project will be realigned to cross at safe locations. Farm equipment will not be allowed to operate on the freeway components of the MCP and would be allowed to operate on local streets consistent with existing California motor vehicle regulations. As a result, the MCP project will not include any hazardous

design features or incompatible uses. Therefore, the MCP project would not substantially increase hazards due to a design feature or incompatible uses. No avoidance, minimization, or mitigation measures are required.

Less than Significant with Mitigation (XVI.e)

As described in Sections 3.5 and 3.6, construction activities, such as temporary road closures, lane closures, or detour routes, could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals in the MCP study area. The risk of wildfires would increase during construction of the MCP project due to the use of combustion engines in construction equipment, welding equipment, and other sources of combustion. Non-fire-related medical emergencies could temporarily increase with the presence of construction workers and heavy machinery during construction of the project, due to the risk of construction site accidents. These potential short-term effects on emergency services during construction would be mitigated, to below a level of significance under CEQA, based on implementation of Measures TR-1, and U&ES-1 to U&ES-7. Those measures require coordination with services providers prior to and during construction to ensure that emergency vehicles can travel through and around project construction areas and the construction activities are conducted in a manner to minimize potential fire risks on and near project construction areas.

During operation of the MCP project, emergency response times would be improved, as the ability to move fire protection and emergency service resources from one area to another would be enhanced by the improved transportation network and paved road access to areas not currently readily accessible to emergency equipment. The new, paved surface of the MCP project may also provide an effective barrier to the spread of wildfires in currently undeveloped areas. No avoidance, minimization, or avoidance measures are required for impacts to emergency access during project operations.

Less than Significant with Mitigation (XVI.f)

As discussed in Section 3.1, the MCP project would result in temporary impacts to regional, bike, and community trails and pedestrian accessways in the MCP study area due to temporary closures and/or rerouting of those facilities during construction. Measures TR-1 and LU-6 through LU-12 would substantially reduce those short-term impacts, to below a level of significance under CEQA. Those measures require coordination by RCTC with the County of Riverside, City of Perris, and City of San Jacinto prior to and during construction to ensure access across the project

construction areas is provided during construction for trails and pedestrian access ways.

The MCP project will provide facilities for bicycles and pedestrians in locations where local streets cross the MCP. Those facilities will be designed to be consistent with the applicable local agency General Plan Circulation Element. In addition, existing and planned bike routes and trails are being considered in the design of the MCP project, and provisions are being made so that bike routes and trails can use the planned overcrossings and undercrossings to cross the MCP project where existing and/or planned features exist. All pedestrian facilities crossing the MCP will be designed to meet or exceed Americans with Disabilities Act (ADA) requirements. Measures LU-9 through LU-15 will ensure that trail and pedestrian facilities crossing the MCP are properly designed and implemented.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The impacts of the operation of the MCP project at six local intersections in the Existing Plus Project conditions would be mitigated to below a level of significance based on implementation of the following measures if improvements to the 2010 conditions at these intersections have not already been implemented prior to opening of the MCP project:
  - **Measure TR-3:** Requires improving the intersection of Cajalco Road/ Alexander Street
  - **Measure TR-4:** Requires improving the intersection of Cactus Avenue and Innovation Drive
  - **Measure TR-5:** Requires improving the intersection of Van Buren Boulevard/Harmon Street
  - **Measure TR-6:** Requires improving the intersection of Van Buren Boulevard/I-215 southbound ramps
  - **Measure TR-7:** Requires improving the intersection of Harley Knox Boulevard/Western Way
- The impacts of the MCP project related to hazards or risks associated with operations at March Air Reserve Base will be less than significant based on implementation of Measure LU-4, which requires airspace review during final design.
- The MCP project would not result in impacts related to hazards due to design features or incompatible uses. No mitigation is required.

- The construction of the MCP project would result in temporary road and lane closures, and detours that would affect the ability of emergency services providers to meet response times. Those effects would be reduced to below a level of significance based on implementation of Measures TR-1, and U&ES-1 through U&ES-7 (described earlier in Section VIII, Hazards and Hazardous Materials).
- The construction of the MCP project would result in short-term impacts on trails and pedestrian accessways. Those effects would be reduced to below a level of significance based on implementation of Measures TR-1 (described earlier in Section VIII) and LU-6 through LU-12 (described earlier in Section XIV, Public Services).

XVII. UTILITIES AND SERVICE SYSTEMS: The construction and operation of the MCP project would result in significant effects related to utilities and service systems if they:

a) Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

d) Do not have sufficient water supplies available to serve the project from existing entitlements and resources, and new or expanded entitlements are needed

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has does not adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

f) Are not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs

g) Do not comply with federal, state, and local statutes and regulations related to solid waste

The information and analyses in this section regarding utilities and service systems are based on the *Final Project Report* (2015) and Sections 3.5, Utilities/Emergency Services, and 3.10, Water Quality and Storm Water Runoff. Section 3.5 describes the existing utility facilities in the MCP study area, the potential short- and long-term impacts of the MCP project on utility facilities and providers, and avoidance, minimization, and mitigation measures to address those adverse impacts of the MCP project.

Existing Conditions

There are a number of utility services and utility lines in the MCP study area. The utility lines are electric, natural gas, water for domestic use and irrigation, wastewater transmission, and telephone, communication, and cable television cables. Utility providers include Verizon (telephone), Adelphia (cable television), Southern California Edison (overhead electric lines), the Southern California Gas Company (gas), Eastern Municipal Water District (water, sanitary sewer), and the Metropolitan Water District of Southern California (water supply, Colorado River Aqueduct pipelines).

No Impact (XVII.a, XVII.b, and XVII.e)

As discussed in Section 3.10, the MCP project would generate runoff that would be collected and treated on site prior to discharge off site. The MCP project would not generate wastewater requiring transport to or treatment at a wastewater treatment facility. As a result, the MCP project would not result in adverse impacts related to wastewater treatment requirements, the need for additional wastewater treatment capacity and/or facilities, or exceedances of the ability of the area wastewater treatment providers to treat wastewater generated in their service areas. No avoidance, minimization, or mitigation measures are required.

No Impact (XVII.c)

As discussed in Chapter 2, Project Alternatives, the MCP project would include appropriate storm water drainage, collection, control, treatment, and release facilities within the project right of way, consistent with the San Jacinto River Drainage Master Plan. New or expanded off-site storm water facilities would not be constructed under any of the MCP project. Therefore, the MCP project would not result in adverse impacts related to new storm water facilities. No avoidance, minimization, or mitigation measures are required.

Less than Significant Impact (XVII.d)

The MCP project would not result in substantial demand for water supplies. Some water may be needed during project construction and as landscaping is planted, to allow the landscaping to become established. During construction of the MCP project, water will be required to be provided for potable use and for dust control. It is estimated that the water supply required for the construction of the MCP project would be approximately 85,000,000 ft^3 over 4 years of construction. However, the demand for water during construction and operation of the MCP project would represent only a very small percent of total demand for water in the area and would not exceed existing entitlements. No avoidance, minimization, or mitigation measures are required.

Less than Significant Impact (XVII.f)

Waste materials generated during construction of the MCP project will include materials from demolished structures such as rebar, wood, concrete, excess soil, and other similar materials, and vegetation removed from construction areas. Waste generated during operation of the MCP project would be limited to trash picked up along the freeway and vegetation from landscaping maintenance. All waste materials will be properly disposed of by the Construction Contractor and RCTC, during

construction and operation of the MCP project, respectively, including diversion from area landfills for reduction, recycling, reuse, and composting (greenwaste). Waste materials generated during construction and operation of the MCP project that cannot or are not diverted would be disposed of at the El Sobrante, Badlands, and/or Lamb Canyon Landfills. The amount of waste materials generated during construction and operation of the MCP project that would be disposed of in landfills would represent only a very small percent of the total amount of waste generated in the region and disposed of at the landfills. As a result, the waste generated during the construction and operation of the MCP project would not exceed the permitted capacity at landfills in Riverside County. No avoidance, minimization, or mitigation measures are required.

No Impact (XVII.g)

As noted in the response to checklist questions XVII.f, above, waste materials generated during construction and operation of the MCP project would be properly disposed of by the Construction Contractor and Caltrans, during construction and operations, respectively, at landfills, materials recycling facilities, and greenwaste collection stations. As a result, the construction and operation of the MCP project would not result in impacts related to compliance with federal, state, and local solid waste statutes and regulations. No avoidance, minimization, or mitigation measures are required.

Level of Significance after Mitigation for the Preferred Alternative

As discussed above:

- The MCP project would not result in impacts related to wastewater treatment and facilities; storm water drainage, collection, control, treatment, and release facilities; and compliance with applicable waste disposal regulations. No mitigation is required.
- The construction and operation of the MCP project would result in less than significant impacts related to the demand for water. No mitigation is required.
- The construction and operation of the MCP project would result in less than significant impacts related to the generation and disposal of solid waste. No mitigation is required.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly

Existing Conditions

The existing conditions in the MCP study area and the surrounding areas in unincorporated Riverside County and the cities of Perris and San Jacinto are described briefly earlier in this chapter for each group of checklist questions and in detail in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures.

Potentially Significant Impact (XVIII.a)

As described earlier in Section IV, Biological Resources, the MCP project has the potential to result in adverse impacts on habitats and natural communities, threatened and endangered species, protected waters, and wildlife movement. These potential adverse impacts of the MCP project would be substantially mitigated, to below a level of significance under CEQA, based on implementation of the avoidance, minimization, and mitigation measures described in Section IV, Biological Resources, of this CEQA chapter and in detail in Sections 3.17 through 3.22.

As discussed in Section V, Cultural Resources, of this CEQA chapter, the MCP project will result in the permanent destruction of 2.6 acres from Site 33-16598, which will result in an adverse effect to that historical resource under CEQA. The area in Site 33-16598 that will be affected is highly disturbed and trench excavations there revealed a drastic drop-off in site artifact density; however, based on Tribal comments, there will be an adverse effect to the site for the National Register under Criterion A. Criterion A is associated with events that have made a significant

contribution to the broad patterns of local of regional history. Because the project would destroy the 2.6 acres of the site in the project area that contributes to its eligibility for the National Register under Criterion A, this would be a significant adverse impact under CEQA. Although the measures stipulated in the Memorandum of Agreement (Appendix U in the Final EIR/EIS) will provide treatment for adverse effects to historic properties, the permanent destruction of part of Site 33-16598 cannot be mitigated and, therefore, would represent the permanent loss of this part of the resource.

It is possible that previously undocumented cultural resources could be discovered during construction of the MCP project, including in the area where Site 33-16598 is located. As a result, the construction of the MCP project would result in an adverse, unavoidable, significant impact under CEQA on previously unknown cultural resources, including possible resources in and near Site 33-16598.

Also, as discussed in Section V, Cultural Resources, of this CEQA chapter, Sites 33-19862, 33-19863, 33-19864, and 33-19866 are prehistoric milling station sites within the project area and right of way that will be destroyed as a result of the MCP project. Although the measures stipulated in the Memorandum of Agreement (Appendix U in the Final EIR/EIS) will provide treatment for adverse effects to historic properties, these four sites will be permanently destroyed; therefore, the MCP project would result in an unavoidable, significant impact under CEQA to Sites 33-19862, 33-19863, 33-19864, and 33-19866.

There are no documented locations of human remains in or adjacent to the disturbance limits or the project area for the MCP project. However, there is the potential that previously undocumented human remains could be disturbed during construction of the MCP project. Measure CUL-2 in Section 3.8 defines the legally required procedures when human remains are discovered. If previously undocumented human remains are discovered during construction of, and cannot be avoided by, the MCP project, compliance as required in Measure CUL-2 would partially reduce the adverse impacts of the project related to human remains. However, implementation of Measure CUL-2 would not reduce those adverse impacts to below a level of significance under CEQA. As a result, should human remains be discovered during construction, the MCP project would result in significant, unavoidable, adverse impacts after mitigation related to the discovery of human remains.

As discussed in Section 3.12, the MCP project may directly or indirectly impact unique paleontological resources during construction. Many of the areas along the alignment of the MCP project have a high level of sensitivity for the presence of paleontological resources. As a result, grading and excavation for the MCP project could adversely impact paleontological resources from as many as seven sedimentary units that may contain fossils. To reduce impacts to paleontological resources that may be present in the areas proposed for grading and excavation for the MCP project, Measure PAL-1 in Section 3.12 requires the preparation during final design and implementation during construction of a detailed *Paleontological Mitigation Plan* (PMP). The actions required in Measure PAL-1 to monitor during construction, collect fossils, document/record those fossils, and curate the fossils in a permanent repository would reduce the adverse impacts of the MCP project to paleontological resources to below a level of significance under CEQA.

In summary, the MCP project would result in significant unavoidable adverse impacts on cultural resources that would affect examples of California history or prehistory.

Potentially Significant Impact (XVIII.b)

As discussed in detail in Section 3.25, Cumulative Impacts, the environmental topics for which the MCP project may contribute to adverse impacts that are not fully mitigated or offset and which were determined to potentially contribute to significant cumulative adverse impacts are:

- **Human Environment**
  - Growth inducement
  - Farmlands
  - Community character and cohesion
  - Visual and aesthetic resources
  - Cultural resources
  - Paleontological resources
  - Greenhouse gas emissions/global climate change
  - Noise

As discussed in detail in Section 3.25, the MCP project is not anticipated to contribute to cumulative adverse impacts related to the following environmental topics:

- **Human Environment**
  - Relocation and real property acquisition

- Land use and planning
- Parks and recreation and Section 4(f)
- Environmental justice
- Utilities
- Public services
- Traffic

- **Physical Environment**
  - Hydrology and floodplains
  - Water quality and storm water runoff
  - Geology, soils, seismicity, and topography
  - Hazardous wastes and materials
  - Air quality
- **Biological Environment**
  - Natural communities
  - Wetlands and other waters of the United States
  - Plant species
  - Animal species
  - Threatened and endangered species
  - Invasive species
  - Energy

Potentially Significant Impact (XVIII.c)

As described above, the short- and long-term direct and indirect effects of the MCP project, when combined with the effects of other cumulative projects, would potentially contribute to cumulative impacts for some environmental topics. The MCP project also has the potential to result in substantial adverse effects on human beings, particularly as a result of the significant unavoidable adverse impacts related to aesthetics, farmland, cultural resources, and noise described earlier.

4.5 Climate Change

4.5.1 Checklist Question: VII

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s,s,s,2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).[1]

There are four primary strategies for reducing GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.[2]

4.5.1.1 Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate.

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1 American Association of State Highway and Transportation Officials. Website: http://climatechange.transportation.org/ghg_mitigation/.

2 Federal Highway Administration. Website: http://www.fhwa.dot.gov/environment/climate_change/mitigation/.

Assembly Bill 1493, Pavley. Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by the 2020, and (3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), Nunez and Pavley, the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and State agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007 Greenhouse Gas Emissions: SB 97 required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375) Chapter 728, 2008 Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Federal

Although climate change and GHG reduction are a concern at the federal level; currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S.EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.[1] FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process, from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 – Federal Leadership in Environmental, Energy and Economic Performance.

[1] On December 18, 2014, the Council on Environmental Quality released revised draft guidance that describes how Federal agencies should consider the effects of greenhouse gas emissions and climate change in their National Environmental Policy Act reviews (http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance). The Council on Environmental Quality is soliciting public comment for a 60-day period closing on February 23, 2015. No date has been established for issuance of the final guidance.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs, and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA, in conjunction with the NHTSA, issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.[1]

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and save 1.8 billion barrels of oil over the lifetime of vehicles sold under the first phase of this national program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model years 2017 through 2025 passenger vehicles. Over the lifetime of the model years 2017-2025 standards,

[1] Center for Climate and Energy Solutions. Website: http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq, accessed November 25, 2013.

this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses, and refuse and utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO_2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model years 2014 to 2018 heavy-duty vehicles.

Thresholds of Significance

Neither the SCAQMD nor Caltrans have established significance thresholds for greenhouse gas emissions for transportation facilities. Therefore, based on the CEQA Guidelines, RCTC has determined that the MCP project would result in significant effects related to greenhouse gas emissions if they:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

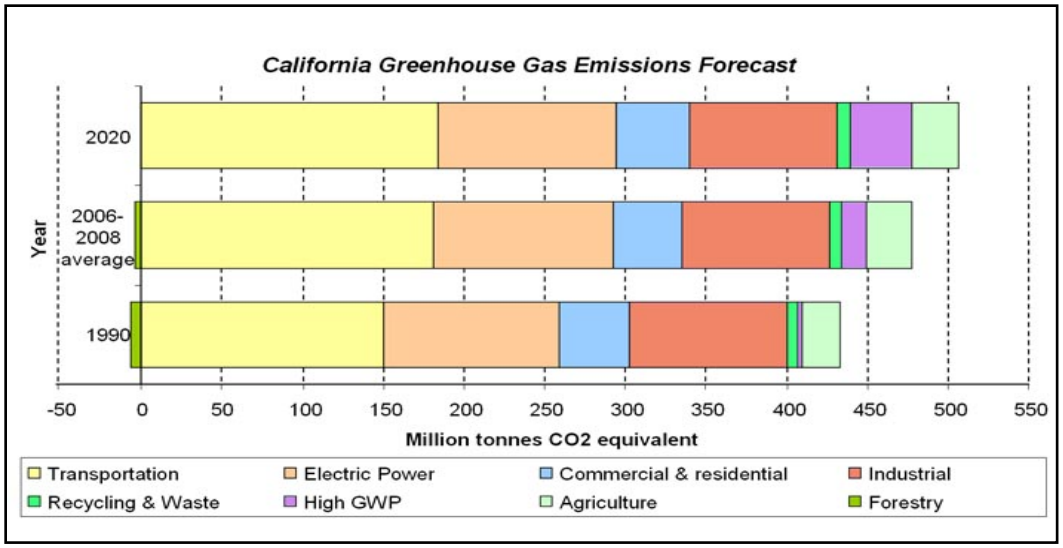
4.5.1.2 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG.[1] In assessing cumulative impacts, it must be determined if a

[1] This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008. The California GHG emissions forecast is shown in Figure 4.1.



Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm.

Figure 4.1 California Greenhouse Gas Forecast

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has

created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[1]

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide (CO_2) from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0–25 miles per hour (see Figure 4.2, below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly CO_2, may be reduced.

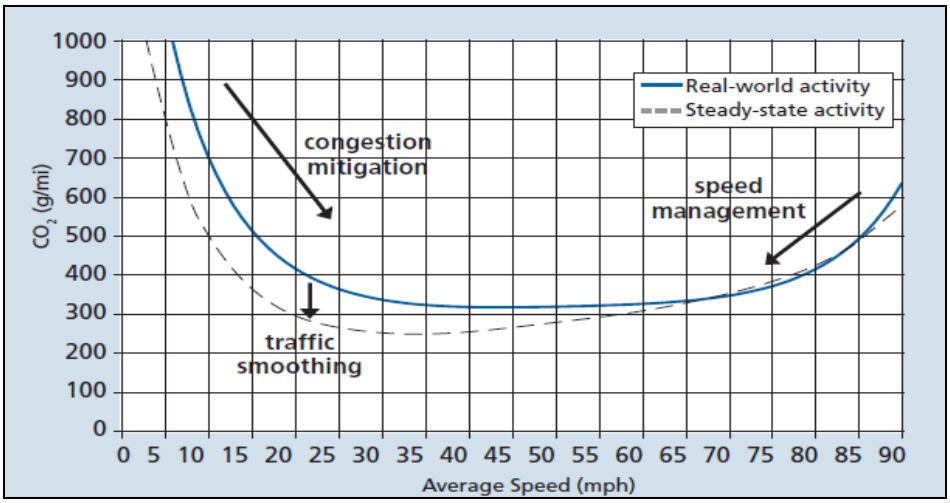


Figure 4.2 Possible Effect of Traffic Operation Strategies in Reducing On-Road CO_2 Emission[2]

4.5.1.3 Long-term Operational Emissions

The *Traffic Technical Study* (April 2011) calculated the daily VMT and daily vehicle hours traveled (VHT) for all of the vehicle trips within the MCP region. This traffic data, in conjunction with the EMFAC2007 emission model, was used to calculate the CO_2 emissions for the Existing, 2020, and 2040 regional conditions. As shown in

1 California Department of Transportation Climate Action Program. Website: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf.

2 Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010). Website: http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf.

Table 4.5.A, the existing plus MCP project conditions would result in a 5 percent reduction in CO_2 emissions within the region when compared to the existing conditions. In 2020 and 2040, when compared to the 2020 and 2040 without project conditions, the MCP project alternatives would result in a small increase (less than 1 percent). This small increase in CO_2 emissions is due to the increased regional VMT associated with existing trips being diverted to the proposed facility.

Table 4.5.A Change in Regional CO_2 Emissions

Alternative	Daily CO_2 Emissions (lbs/day)	Increase from Existing (lbs/day)	Increase from No Build (lbs/day)	Percent Increase from No Build
Existing (2008)	57,051,980	-	-	-
Existing + Alt 4 Mod	54,185,822	-2,866,069	-2,866,069	-5%
Existing + Alt 5 Mod	54,045,450	-3,006,440	-3,006,440	-5%
Existing + Alt 9 Mod	54,091,127	-2,960,763	-2,960,763	-5%
2020 No Build	87,631,280	30,579,300	-	-
2020 Alt 4 Mod	87,885,919	30,833,939	254,639	0.29%
2020 Alt 5 Mod	87,853,255	30,801,275	221,975	0.25%
2020 Alt 9 Mod	87,906,784	30,854,804	275,504	0.31%
2040 No Build	125,539,130	68,487,150	-	-
2040 Alt 4 Mod	126,057,775	69,005,795	518,645	0.41%
2040 Alt 5 Mod	126,043,848	68,991,868	504,719	0.40%
2040 Alt 9 Mod	126,150,645	69,098,665	611,515	0.49%

Source: LSA Associates, Inc.(2012).
Alt = Alternative
CO_2 = carbon dioxide
lbs/day = pounds per day
Mod = Modified

4.5.1.4 Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be provided at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. The maximum amounts of construction-related emissions during a peak construction day for the MCP project are presented in Table 4.5.B. The emissions presented below are based on the best information available at the time of these calculations and assume that the schedule for all improvements is anticipated to take approximately 48 months, beginning in 2016 and ending in 2020. The construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) Road

Construction Emissions Model, Version 7.1.4, a model approved for use within the South Coast Air Basin by the SCAQMD. The project schedule and disturbed area would be similar for all the Build Alternatives; therefore, the emissions listed in Table 4.5.B would apply to Alternatives 4 Modified, 5 Modified, and 9 Modified.

The construction emissions listed in Table 4.5.B include emissions generated by material deliveries, worker trips, soil import and export, water trucks, generators, pumps, signal boards, and off-road equipment such as graders, scrapers, and loaders.

Table 4.5.B Maximum Project Construction Greenhouse Gas Emissions

Project Phases	CO_2 (lbs/day)
Grubbing/Land Clearing (lbs/day)	18,741.0
Grading/Excavation (lbs/day)	48,844.7
Drainage/Utilities/Sub-Grade (lbs/day)	19,564.1
Paving (lbs/day)	12,330.7
Haul Trucks	15,621.7
Maximum (lbs/day)	64,466.4
Total (metric tons/construction project)	20,251.0

Source: LSA Associates, Inc. (November 2014).
CO_2 = carbon dioxide
lbs/day = pounds per day

4.5.1.5 Total Emissions

Table 4.5.C lists the total increase in GHG emissions that would be generated by each Build Alternative between 2020 and 2040, the years for which traffic data is available and the project is expected to be operational. The annual emissions were calculated by multiplying the daily increase in CO_2 emissions by 365. As shown in Table 4.5.C, over a 20-year period (20 years is the minimum pavement design life per Topic 612 in the Caltrans *Highway Design Manual*, 2012), the Build Alternatives would add 1,263,293 to 1,542,003 metric tons of CO_2 to the project region, depending on the Build Alternative. When added to the 17,910 metric tons of CO_2 that would be generated during construction of the MCP project (Alternative 9 Modified with the SJRB DV), it is estimated that the MCP project would generate up to 1,559,913 metric tons of CO_2 in the project area over the 20-year period.

Table 4.5.C Total Increase in Regional CO2 Emissions (Metric Tons) between 2020 and 2040

Alternative	Operational Emissions (On-road Vehicles)	Construction Emissions	Total Emissions	Percent of GHG Emissions Generated by On-Road Vehicles
Alt 4 Mod	1,344,285	20,251	1,364,536	98.5%
Alt 5 Mod	1,263,293	19,497	1,282,789	98.5%
Alt 9 Mod	1,542,003	17,910	1,559,913	98.9%

Source: LSA Associates, Inc. (January 2014).
Alt = Alternative
CO_2 = carbon dioxide
GHG = greenhouse gas
Mod = Modified

By reducing unnecessary idling, maintaining construction equipment, using newer Tier 2 and Tier 3 off-road equipment, and using solar power or electricity from power poles, Measures AQ-2 and AQ-3, listed in Section 3.14.4 of the EIR/EIS, would reduce the GHG emissions generated by the on-site construction equipment. However, as shown in Table 4.5.C, over 98 percent of the emissions of the Build Alternatives would be generated by operational emissions from on-road vehicles. Therefore, these mitigation measures would not measurably reduce the emissions listed in Table 4.5.C.

4.5.1.6 CEQA Conclusion

As stated in Section 4.5.1.1, neither the SCAQMD nor Caltrans have established significance thresholds for greenhouse gas emissions for transportation facilities. Therefore, RCTC has used the CEQA Guidelines to determine the significant effects of the MCP project related to greenhouse gas emissions.

The existing conditions in 2008 plus MCP project alternatives would result in a 5 percent reduction in CO_2 emissions within the region when compared to the existing conditions. However, as discussed above, the MCP project would result in an increase (less than 1 percent) in CO_2 emissions within the region in 2020 and 2040 when compared to the 2020 and 2040 without project conditions. As shown in Table 4.5.C, it is estimated that the MCP project would contribute up to 1,559,913 metric tons of CO_2 to the project area between 2020 and 2040. CEQA says that there is no "iron clad definition of significant effect" (State CEQA Guidelines Section 15064(b)), and so leaves it to a lead agency's discretion to determine when GHG emission are significant under CEQA (State CEQA Guidelines, Section 15064.4.) Therefore, in the absence of a state-established numerical threshold and in an abundance of caution,

RCTC has concluded that the proposed project would generate GHG emissions that may have a significant impact on the environment.

Within its 2011 update to the 2008 Assembly Bill 32 Scoping plan, ARB determined that under BAU conditions that the State's 2020 GHG emissions would be 507 million metric tons. According to Executive Order S-3-05, California is required to reduce its annual emissions to 1990 levels by 2020. ARB has established that the level of annual GHG emissions in 1990 for California was 427 million metric tons of "CO_2 equivalence" (CO_2e). To meet the 427 million metric ton goal the state would need to reduce the 2020 emissions by 80 million metric tons or approximately 15.8 percent from BAU. Based on the results shown in Table 4.5.A, in 2020, the proposed project would add up to 45,600 metric tons of CO_2 to the project area. By adding emissions to the project area that would not be generated under the no build conditions, the proposed build alternatives could delay the state's goal of reducing the GHG emissions to 1990 levels by 2020. Therefore, the proposed project would conflict with the emission reduction goals in Assembly Bill 32.

The majority (over 98 percent as shown in Table 4.5.C) of these emissions is generated by on-road vehicles. Because RCTC does not have the legal authority to control on-road vehicle emissions, there are no measures that can be implemented by RCTC to reduce that impact to less than significant under CEQA. In addition, RCTC lacks the land use authority to construct off-site GHG reducing facilities, such as solar or wind farms, capable of offsetting some or all of the project's GHG emissions. GHG emissions generated by the MCP project will be partially offset by the following:

- The provision in California's Cap-and-Trade Program enabling fuel providers to incorporate costs of complying with the requirements of AB 32 cap on carbon emissions into the fuels they sell. This provision which became effective January 1, 2015, is a new mechanism to address the effects of carbon emissions from motor vehicles (http://www.arb.ca.gov/cc/capandtrade/guidance/faq_fuel_purchasers.pdf).
- The MCP project is part of the SCAG's 2012 Regional Transportation Plan/ Sustainable Communities Strategy, a regional plan which includes measures to address the goals of AB 32 and SB 375.
- As part of its mitigation commitments for the Western Riverside County MSHCP (see Appendix T) of this Final EIR/EIS, RCTC will acquire and place into

conservation of approximately 150 acres of native plant communities that would otherwise be subject to development.

However, even with the offsets to GHG emissions generated by the MCP project noted above, the MCP project would result in a significant unavoidable adverse impact due to generation of GHG emissions.

RCTC has incorporated the following measure in the MCP project to reduce construction emissions:

AQ-6 **Construction Emissions:** The RCTC Resident Engineer will require the construction contractor to incorporate the following in use of materials to construct the MCP project:

- If available for purchase within Riverside county, locally made building materials will be used for construction of the project and associated infrastructure.
- Demolished and waste construction materials will be reused/recycled to the extent possible and financially responsible prior to consideration of disposal of those materials in approved landfills.

Greenhouse Gas Reduction Strategies

Assembly Bill 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Many of the strategies Caltrans is using to help meet the targets in Assembly Bill 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and

preservation, smart land use and demand management, and operational improvements as depicted in Figure 4.3: The Mobility Pyramid.

Figure 4.3 The Mobility Pyramid

RCTC is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. RCTC is working closely with local jurisdictions on planning activities; however, RCTC does not have local land use planning authority. RCTC is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; and by supporting legislative efforts to increase fuel economy. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at UC Davis.

Table 4.5.D summarizes Caltrans and statewide efforts that it is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 4.5.D Climate Change/CO_2 Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.007	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5% limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	CalEPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					**2.72**	**18.18**

Source: Caltrans Environmental Impact Report/Environmental Impact Statement Annotated Outline (Revised August 2013).
ARB = California Air Resources Board
BT&H = Business, Transportation and Housing Agency
CalEPA = California Environmental Protection Agency
CEC = California Energy Commission
CO_2 = carbon dioxide
GHG = greenhouse gases
MMT = million metric tons
MPOs = Metropolitan Planning Organizations

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Landscaping reduces surface warming, and through photosynthesis, decreases CO_2. Landscaping would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation planting for the project. The landscape planting would help offset any potential CO_2 emissions increase. Landscaping will be provided as part of the MCP Project as described in Section 2.3.2.10, Landscaping, in Chapter 2, Project Alternatives, and as required in Measures VIS-5 (MCP Landscape Plan) and VIS-6 (Trees) provided in Section 3.7, Visual/Aesthetics.
2. The project would incorporate the use of energy-efficient lighting, such as light-emitting diode (LED) traffic signals. LED bulbs—or balls, in the stoplight vernacular—cost $60 to $70 apiece but last 5 to 6 years, compared to the 1-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the project's CO_2 emissions.[1] The use of LED bulbs would be consistent with existing practices in highway design and operations related to the use of LED lights in light fixtures along freeway mainlines and ramps, and at interchanges. No mitigation measure is required for the MCP project for this project feature.
3. According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to 10 minutes in each direction. In addition, the contractor must comply with Title 13, CCR Section 2449(d)(3) that was adopted by the ARB on June 15, 2008. This regulation restricts idling of construction vehicles to no longer than 5 consecutive minutes. Compliance with this regulation reduces harmful emissions from diesel-powered construction vehicles. Measure AQ-4 in Section 3.14, Air Quality, requires compliance with the Caltrans Standard Specifications for Construction which include restrictions related to idling time for lane closures.

4.5.1.7 Adaptation Strategies

"Adaptation strategies" refer to how RCTC and other transportation agencies can plan for the effects of climate change on the State's transportation infrastructure and

[1] *Knoxville Business Journal*, "LED Lights Pay for Themselves," May 19, 2008. Website: http://www.knoxnews.com/news/2008/may/19/led-traffic-lights-pay-themselves/.

strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat, increasing storm damage from flooding and erosion, and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanographic and Atmospheric Administration, released its interagency report October 14, 2010, outlining recommendations to President Obama for how federal agency policies and programs can better prepare the United States to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the federal government implement actions to expand and strengthen the nation's capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This Executive Order set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency was directed to coordinate with local, regional, state, and federal public and private entities to develop the California Climate Adaptation Strategy (December 2009),[1] which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to

[1] California Energy Commission. Website: http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF.

the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the California Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continue to be developed and collected, the State's adaptation strategy will be updated to reflect current findings.

A 2013 FHWA report (http://www.fhwa.dot.gov/environment/climate_change/adaptation/resources_and_publications/transportation_projects/transportationprojects.pdf) discusses potential adaptation measures applicable to transportation projects. As indicated in that report, the development of climate change adaptation strategies for transportation projects (including highway projects) is evolving and the report provides an overview of the "state of the practice" in the United States and throughout the world. Of particular relevance to the MCP project because it is being designed to meet State Highway standards is the Caltrans' report entitled "Caltrans Activities to Address Climate Change – Reducing Greenhouse Gas Emissions and Adapting to Impacts" (http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/documents/Caltrans_ClimateChangeRprt-Final_April_2013.pdf). Section 8.2.3, Caltrans Adaptation Activities – Project Delivery, of this report states that:

> "…the design of transportation assets is driven in part by local climate conditions. Caltrans will design and construct based on presently known or expected hydrologic, temperature, and other climate conditions. Caltrans views its responsibilities as designing and constructing based on the best information available. Any efforts by other state and national agencies to account for climate change will ripple through to Caltrans' design and construction activities."

Table 12, Potential Climate Change Impacts on California Surface Transportation Infrastructure and Associated Adaptation Strategies, in the Caltrans report provides a list of strategies to address increase in intense precipitation events as well as increase in temperature and extreme heat events. These strategies include increased capacity and maintenance at pump plant facilities (ensuring that drainage systems are adequate to accommodate flood conditions), increased monitoring of infrastructure during extreme heat events (to ensure public safety), improved monitoring of bridge joints (to ensure public safety), increased ongoing bridge maintenance (to ensure public safety), increased vegetation management (to ensure protection of streams, associated floodplains, and adjacent wildlands), and increased monitoring of slope stability in vulnerable areas (to ensure protection of streams, associated floodplains, and adjust wildlands). Because the MCP project will be designed, constructed, and operated in accordance with the most current Caltrans highway design and maintenance standards in effect at the time of design, construction, and operation, these types of climate change adaptive strategies will be incorporated into the MCP project during final design and operation of the project.

At the request of the California Natural Resources Agency, the National Academy of Science prepared the Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present and Future (2012)[1] to help advise how California should plan for future sea level rise. While estimates vary, sea level California is expected to rise approximately 24 inches over the next century.[2] Because the MCP project site is located approximately 1,500 ft above sea level and 35 miles from the coast, the area of the project would not be affected by an approximately 24-inch rise in sea level over the next century. Therefore, the potential effects of climate change on the project would not be significant.

4.6 Energy Conservation

The CEQA Guidelines, Appendix F, Energy Conservation, state that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

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1 Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (2012) (National Resource Council).

2 California, Department of Water Resources, 2006. *Progress on Incorporating Climate Change into Management of California's Water Resources.* July.

The following items required for an energy analysis per the CEQA Guidelines are summarized below, with references to where information can be found in this Final EIR/EIS:

a) **Project Description:** The energy analysis in Section 3.16 includes an analysis of the energy consumed by the on-road vehicles for each of the MCP Build Alternatives and a discussion of temporary energy needs for construction operations.
b) **Environmental Setting:** The energy analysis in Section 3.16 includes a description of the fuel and natural gas currently consumed within the SCAG region.
c) **Environmental Impacts:** The energy analysis in Section 3.16 evaluates potential impacts associated with short-term construction and long-term operational energy consumption.
d) **Mitigation Measures:** The MCP project would result in a nominal (maximum of 0.36 percent) annual increase in regional energy consumption compared to the No Build Alternatives due to project operation as a result of increased VMT. Mitigation Measures AQ-1 through AQ-5, which are discussed in Section 3.14, will reduce impacts related to energy consumption.
e) **Alternatives:** The energy analysis in Section 3.16 evaluates the long-term energy consumption needs of each of the MCP Build Alternatives.
f) **Unavoidable Adverse Effects:** Implementation of the MCP project would result in a nominal (maximum of 0.36 percent) long-term increase in regional energy consumption.
g) **Irreversible Commitment of Resources:** Implementation of the MCP project would not commit any future resources that would preempt future energy development or future energy conservation.
h) **Short-term Gains versus Long-term Impacts:** As discussed in Section 3.16, the MCP project would result in a nominal increase in long-term energy consumption.
i) **Growth-Inducing Effects:** The purpose of the MCP project is to accommodate planned growth in western Riverside County. The MCP project would not generate any new vehicle trips. As discussed in Section 3.2, the MCP project has some potential to result in revised land use plans in the vicinity of new interchanges where none were planned previously.

4.7 Mitigation Measures for Significant Impacts Under CEQA

The following avoidance, minimization, mitigation, and compensation measures are included in the MCP project to address significant adverse impacts of those alternatives on the resources as described earlier in this section. The complete text of each measure is provided in the appropriate sections of Chapter 3.0, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures, and in Appendix F, Environmental Commitments Record.

4.7.1 Measures for Aesthetics

- VIS-1: Construction Plan including construction and staging areas
- VIS-2: Construction lighting
- VIS-3: MCP Corridor Master Plan
- VIS-4: Structural and hardscape elements
- VIS-5: MCP Landscape Plan
- VIS-6: Trees (removal and replacement)
- VIS-7: Lighting

4.7.2 Measures for Agriculture and Forest Resources

- LU-5: General Plan consistency
- AG-1: Notification to agricultural property owners
- AG-2: Temporary livestock and equipment crossings
- AG-3: Equipment crossings (permanent)
- AG-4: Notification to agencies regarding Williamson Act contracts

4.7.3 Measures for Air Quality

- AQ-1: Fugitive Dust Source Controls
- AQ-2: Mobile and Stationary Source Controls
- AQ-3: Administrative Controls
- AQ-4: Caltrans Standard Specifications for Construction
- AQ-5: Asbestos-Containing Materials
- AQ-6: Construction Emissions

4.7.4 Measures for Biological Resources

- NC-1: Project Biologist
- NC-2: Environmentally sensitive areas
- NC-3: Nesting birds

- NC-4: Design and construction management measures
- NC-5: Conservation areas
- NC-6: Salvage of Alkali Soils
- NC-7: Compliance with the commitments under the Western Riverside County Multiple Species Habitat Conservation Plan
- VIS-2: Construction lighting
- VIS-7: Lighting
- WQ-3: Design Pollution Prevention and Treatment BMPs
- IS-1: Landscaped disturbed areas
- IS-2: Verify Seed Purity
- IS-3: Cleaning Construction Equipment
- IS-4: Covering Truck Loads
- IS-5: Inspection of Material from Borrow Sites
- IS-6: Weeds and Invasive Plants Control
- AS-1: Burrowing owl habitat
- AS-2: Active burrowing owl nests
- AS-3: Burrowing owl relocation/translocation plan)
- AS-4: Bat maternity roosting season
- AS-5: Humane bat eviction/exclusion
- AS-6: Retention of existing bat roosting habitat and creation of habitat replacement structures
- TE-1: Conservation of Off-Site Mitigation Areas
- WET-1: Permanent Impacts to Jurisdictional Areas
- WET-2: Temporary Impacts to Jurisdictional Areas
- WET-3: Habitat Mitigation Program
- WET-4: Permits

4.7.5 Measures for Cultural Resources

- CUL-1: Discovery of cultural materials
- CUL-2: Discovery of human remains
- CUL-3: Environmentally Sensitive Areas
- CUL-4: Archaeological Monitor
- CUL-5: Cultural Resources Monitoring Agreement
- CUL-6: Curation of archeological collections
- CUL-7: Native American consultation
- PAL-1: Paleontological Mitigation Plan

4.7.6 Measures for Geology and Soils

- GEO-1: Final Geotechnical Report
- GEO-3: Quality Assurance/Quality Control Plan

4.7.7 Measures for Greenhouse Gas Emissions

- Measures AQ-1 to AQ-5, above, also address greenhouse gas emissions.
- Climate Change Measures 1–3

4.7.8 Measures for Hazards and Hazardous Materials

- HW-1: Site investigations
- HW-2: Soil sampling
- HW-3: Hazardous Building Materials
- HW-4: Utility inspections
- HW-5: Yellow traffic stripes and pavement markings
- HW-6: South Coast Air Quality Management District (SCAQMD) Rule 1403
- HW-7: Groundwater removal
- HW-8: Soil sampling adjacent to the Burlington Northern Santa Fe Railway Company right of way
- HW-9: Soil sampling for pesticides
- HW-10: Caltrans Unknown Hazards Procedures for Construction
- HW-11: Health and Safety Plan
- HW-12: Underground transmission lines
- LU-4: March Joint Powers Authority Airspace Review
- U&ES-1 to U&ES-7: Refer to these measures in the Measures for Public Services, below.
- TR-1: Traffic Management Plan

4.7.9 Measures and Conditions for Hydrology and Water Quality

- WQ-1: National Pollutant Discharge Elimination System Permits
- WQ-2: National Pollutant Discharge Elimination System CAG998001
- WQ-3: Design Pollution Prevention and Treatment BMPs
- Condition FP-1: Conditional Letter of Map Revision and Letter of Map Revision

4.7.10 Measures for Land Use and Planning

- CC-2: Placentia Avenue Connection
- LU-5: General Plan consistency
- TE-1: Conservation of Off-Site Mitigation Areas

4.7.11 Measures for Mineral Resources

No avoidance, minimization, mitigation, and compensation measures are required.

4.7.12 Measures for Noise

- N-1: Sound barriers
- N-2: Construction noise
- N-3: Noise Ordinances

4.7.13 Measures for Population and Housing

- LU-5: General Plan consistency
- CC-3: Uniform Act

4.7.14 Measures for Public Services

- U&ES-1: Fire protection
- U&ES-2: Fire protection access during construction
- U&ES-3: Fire protection access during operations
- U&ES-4: Fire protection during construction
- U&ES-5: Fire protection during construction
- U&ES-6: Fire protection
- U&ES-7: Fire, emergency medical, and law enforcement call boxes
- CC-3: Uniform Act
- LU-9 through LU-15: Refer to these measures in the Measures for Recreation, below.

4.7.15 Measures for Recreation

- LU-6: Existing pedestrian and trail facilities
- LU-7: Temporary closures of trails
- LU-8: Signing for alternate trail routes
- LU-9: Contact information at trail detours
  LU-10: Restoration of impacted trail segments
- LU-11: Permanent trail closures
- LU-12: Permanent trail changes
- TR-1: Traffic Management Plan

4.7.16 Measures for Transportation/Traffic

- TR-1: Traffic Management Plan
- TR-3: Improve the intersection of Cajalco Road/Alexander Street
- TR-4: Improve the intersection of Cactus Avenue/Innovation Drive

- TR-5: Improve the intersection of Van Buren Boulevard/Harmon Street
- TR-6: Improve the intersection of Van Buren Boulevard/I-215 southbound ramps
- TR-7: Improve the intersection of Harley Knox Boulevard/Western Way
- U&ES-1 to U&ES-7: Refer to these measures in the Measures for Public Services, above.
- LU-4: March Joint Powers Authority Airspace Review
- LU-6: Existing pedestrian and trail facilities
- LU-7: Temporary closures of trails
- LU-8: Signing for alternate trail routes
- LU-9: Contact information at trail detours
- LU-10: Restoration of impacted trail segments
- LU-11: Permanent trail closures
- LU-12: Permanent trail changes

4.7.17 Measures for Utilities and Service Systems

No avoidance, minimization, mitigation, and compensation measures are required.

4.8 Comparison of the Alternatives and Identification of the Environmentally Superior Alternative

Table 4.8.1 summarizes the environmental impacts of No Build Alternatives 1A and 1B, and Alternatives 4 Modified, 5 Modified, and 9 Modified, based on the detailed analyses provided in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures. Where the impacts are the same for the three build alternatives, those impacts are described only once in the table. The adverse impacts described in Table 4.8.1 would be substantially mitigated based on implementation of the mitigation measures listed earlier in Section 4.7, Mitigation Measures for Significant Impacts under CEQA.

As shown in Table 4.8.1, for the MCP project, No Build Alternative 1A (the "no project" alternative under CEQA) is the environmentally superior alternative. However, Alternative 1A does not meet the project objectives, as follows:

1. Alternative 1A would not effectively and efficiently accommodate regional west-east movement of people and goods between and through Perris and San Jacinto. As documented in Section 3.6 of this Recirculated Draft EIR/Supplemental Draft EIS, travel times between I-215 in Perris and SR-79 in San Jacinto would be

Table 4.8.1 Summary of Potential Impacts

	No Build Alternative 1A	No Build Alternative 1B	Alternative 4 Modified	Alternative 5 Modified	Alternative 9 Modified
Land Use: Existing and Future Land Uses	No impact	Less than the Build Alternatives	1,397.0 acres of land use impacts	1,382.0 acres of land use impacts	***1,332.4 acres of land use impacts***
Land Use: Consistency with Federal, State, Regional, and Local Plans	No impact	No impact	All the MCP Build Alternatives are inconsistent with Land Use Policies LU 16.2 and 16.4 in the Riverside County General Plan, which protect agricultural lands; and inconsistent with designated roads and land uses in the City of Perris General Plan because they do not follow the original Community and Environmental Transportation Acceptability Process (CETAP) alignment; and amendments to San Jacinto General Plan would be required to reflect the San Jacinto North or San Jacinto South alignment at the east end of MCP.		
Land Use: Parks and Recreation Facilities	No impact	No impact	***Alternative 4 Modified would not result in temporary or permanent impacts to Liberty Park.***	Alternative 5 Modified and its design variations (DVs) would result in a 0.01 acre temporary construction easement (TCE) in Liberty Park, but no permanent impacts.	Alternative 9 Modified and its DVs would result in a 0.1 acre TCE in Liberty Park but no permanent impacts.
Growth	No impact	No impact	The MCP project is not expected to result in adverse growth-related effects. However, some segments of the MCP project are in areas that were not previously analyzed under CETAP and those areas may be subject to growth-related effects to resources of concern. Because the MCP project would implement CETAP in accordance with the Western Riverside County MSHCP, growth-related effects in areas previously not addressed through the CETAP process and impacting environmental resources of concern would be minimized and mitigated for by compliance with the Western Riverside County MSHCP.		
Farmlands and Timberlands	No impact	No impact	Prime Farmland: 212.7 acres Farmland of State Importance: 164.7 acres Unique Farmland 47.5 acres Farmland of Local Importance: 601.0 acres Grazing Land: 81.5 acres Total: 1,107.3 acres	Prime Farmland: 250.8 acres Farmland of State Importance: 149.9 acres Unique Farmland: 47.5 acres Farmland of Local Importance: 538.0 acres Grazing Land: 75.7 acres Total: 1,061.9 acres	***Prime Farmland: 191.0 acres Farmland of State Importance: 150.0 acres Unique Farmland: 48.0 acres Farmland of Local Importance: 578.6 acres Grazing Land: 74.9 acres Total: 1,041.8 acres***
Community Impacts: Community Character, Cohesion	No impact	No impact	All the MCP project Build Alternatives would result in a physical change that would permanently alter the character of the existing community as a result of the construction of a six-lane controlled access freeway. However, the MCP project would benefit these communities by providing improved mobility in the MCP study area and better connectivity to other parts of the MCP study area, western Riverside County, and the region as a whole.		
			Alternative 4 Modified would follow closely along the existing Perris Valley Storm Drain and Ramona Expressway near the (Interstate 215 [I-215] connection and result in a circuitous route building 3 miles of freeway for a travel distance of 1.5 miles.	Alternative 5 Modified would bisect several large intermodal distribution centers on Rider Street, and would impact commercial and industrial businesses adjacent to I-215, and a few industrial businesses along Perris Boulevard.	Alternative 9 Modified would bisect a residential community located between Placentia Avenue and Rider Street and a cluster of businesses in the northeast quadrant of the proposed MCP/Redlands interchange.
			Alternative 4 Modified would result in a direct impact to portable classrooms at Val Verde High School and the Val Verde Unified School District Administrative and Facilities Operation Building (City of Perris).	Alternative 5 Modified would result in a direct impact to portable classrooms at Val Verde High School and the Val Verde Unified School District Administrative and Facilities Operation Building (City of Perris).	***Alternative 9 Modified would not result in direct impacts to schools.***
Community Impacts: Relocations	No impact	No impact	***91 nonresidential property acquisitions and displacements*** 48 residential property acquisitions and displacements 68 businesses displaced 350 employees displaced 426 residents displaced	159 nonresidential property acquisitions and displacements ***36 residential property acquisitions and displacements*** 90 businesses displaced 1,129 employees displaced **373 residents**	103 nonresidential property acquisitions and displacements 102 residential property acquisitions and displacements ***37 businesses displaced*** ***188 employees displaced*** 659 residents
			Property tax revenue loss of $175,547 Sales tax loss of $3,085,655	Property tax revenue loss of $441,402 Sales tax loss of $4,195,741	Property tax revenue loss of $570,081 ***Sales tax loss of $1,521,443***
Community Impacts: Environmental Justice	No impact	No impact	Alternative 4 Modified and its DVs would have the fewest physical impacts on minority and low-income populations as result of property acquisitions and displacements and impacts to community character and cohesion.	Alternative 5 Modified would have the greatest impact on minority and low-income populations as result of acquisitions and displacements of businesses in areas with minority and low-income populations and effects on community character and cohesion.	Alternative 9 Modified would have the greatest impact on minority and low-income populations as result of acquisitions and displacements of residential uses in areas with minority and low-income populations and effects on community character and cohesion.
			As discussed in Section 3.4.3, this impact is considered disproportionate under federal Executive Order 12898 regarding Environmental Justice.		

Table 4.8.1 Summary of Potential Impacts

	No Build Alternative 1A	No Build Alternative 1B	Alternative 4 Modified	Alternative 5 Modified	Alternative 9 Modified
Utilities and Emergency Services	No impact	Less impact than for MCP project	All the MCP Build Alternatives would have beneficial effects on the ability of the Riverside County Fire Department, the City of Perris Fire Department, and the City of Perris Police Department to provide services to the MCP study area.		
			All the MCP Build Alternatives would require relocation of existing utilities.		
			Construction activities, such as temporary road closures, lane closures, or detour routes, could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals in the MCP study area.		
			The risk of wildfires would increase during construction of the MCP project due to the use of combustion engines in construction equipment, welding equipment, and other sources of combustion.		
Traffic and Transportation/ Pedestrian and Bicycle Facilities	In 2040, the travel time from I-215 to State Route 79 (SR-79) will be 44.3 minutes. There would be no improvements to east-west travel on Ramona Expressway; therefore, there will be no effect on traffic circulation under Alternative 1A.	In 2040, the travel time from I-215 to SR-79 will be 44.3 minutes. While some intersections would improve in level of service (LOS) under Alternative 1B in 2040, there will still be intersections along Ramona Expressway that would be below the acceptable LOS standards.	The MCP project will not cause a substantial increase in traffic in relation to the existing and projected traffic load and capacity of the street system.		
			In 2040, the travel time on the MCP from I-215 to SR-79 will be 15.9 minutes.	In 2040, the travel time on the MCP from I-215 to SR-79 will be 14.8 minutes.	***In 2040, the travel time on the MCP from I-215 to SR-79 will be 14.2 minutes.***
			The MCP Build Alternatives will result in temporary and permanent impacts to traffic circulation due to traffic diversions resulting from local road closures and temporary ramp and I-215 mainline lane closures during construction.		
			All the MCP Build Alternatives will result in temporary and permanent impacts to existing and planned trails that cross the proposed freeway alignment.		
Visual and Aesthetics	No impact	No impact	Short-term visual impacts would occur to sensitive viewers during the construction period, and include views of demolition of existing structures, clearing of existing vegetation, grading of cut-and-fill slopes, construction of the MCP road and structures, construction vehicles, and construction staging areas.		
			Long-term impacts resulting from the permanent alteration of the visual environment through construction of the highway and associated bridges, interchange structures, retaining walls, and sound walls.		
Cultural Resources	No impact	No impact	Five archaeological resources including one National Register of Historic Places (National Register) eligible archeological resource that is also a sacred site and one built environment resource (i.e. dairy).		
Hydrology and Floodplain	No impact	No impact	Longitudinal encroachments at the Perris Valley Storm Drain and the San Jacinto River at SR-79 Transverse encroachment at the San Jacinto River at Lakeview		
Water Quality and Storm Water Runoff	No impact	No impact	1,153 acres of disturbed soil 13 stream crossings 525 acres of new pavement	1,145 acres of disturbed soil ***11 stream crossings*** 516.9 acres of new pavement	***1,091 acres of disturbed soil*** 13 stream crossings ***479.5 acres of new pavement***
			6 acres of steep slopes Decrease in annual loading with implemented best management practices (BMPs)		
Geology, Soil, Seismic, Topography	No impact	Less impacts than the MCP project	The MCP Build Alternatives would alter existing landforms due to grading and construction of various cut-and-fill slopes.		
			Construction activities may also temporarily disturb soil outside the facility footprint, primarily in the trample zone around work areas, heavy equipment traffic areas, and material laydown areas.		
			Temporary impacts related to soil compaction and increased potential for soil erosion.		
			Construction activities could be impacted by ground motion and liquefaction, and possibly ground rupture (deformation) if an earthquake occurred during construction.		
Paleontology	No impact	No impact	Impacts 95 acres of Low Sensitivity and 1,301 acres of High Sensitivity areas that may contain paleontological resources (total: 1,396 acres).	Impacts 90 acres of Low Sensitivity and 1,291 acres of High Sensitivity areas that may contain paleontological resources (total: 1,381 acres).	***Impacts 89 acres of Low Sensitivity and 1,243 acres of High Sensitivity areas that may contain paleontological resources (total: 1,332 acres).***

Table 4.8.1 Summary of Potential Impacts

	No Build Alternative 1A	No Build Alternative 1B	Alternative 4 Modified	Alternative 5 Modified	Alternative 9 Modified
Hazardous Waste and Materials	No impact	Hazardous materials similar to those for the MCP project could be encountered during construction of the projects included in Alternative 1B.	103 hazardous material/ waste sites within 0.25 mile of the alignment.	110 hazardous material/ waste sites within 0.25 mile of the alignment.	***95 hazardous material/ waste sites within 0.25 mile of the alignment.***
			Potential for hazardous materials spills as a result of traffic accidents on the MCP.		
			Potential for vehicles traveling on the MCP to transport hazardous substances that could spill and impact the roadway, adjacent properties, or resources.		
Air Quality	No impact	No impact	Short-term air pollutant emissions a result of construction activities would include fugitive dust from grading/site preparation, equipment exhaust, and use of emulsified asphalt paving materials, which would exceed the SCAQMD significance thresholds.		
			When the project trips are added to the 2020 and 2040 No Build conditions, respectively, the regional emissions increase for all the criteria pollutants and the changes in CO, reactive organic gases (ROGs), and NO_X emissions would exceed the SCAQMD's significance thresholds.		
Climate Change	No impact	Less impact than the MCP project	The MCP project would result in a small increase (less than 1 percent) in carbon dioxide (CO_2) emissions in the region in 2020 and 2040 when compared to the 2020 and 2040 No Build conditions. It is estimated that the MCP project would contribute up to 1,559,913 metric tons of CO_2 to the project area between 2020 and 2040 with the majority (98 to 99 percent) of these emissions generated by on-road vehicles.		
Noise	No impact	Less impact than for MCP project	Of the 337 modeled receptors, 73 approach or exceed the 67 A-weighted decibels (dBA) equivalent continuous sound level (L_{eq}) Noise Abatement Criteria (NAC) and 133 would experience a substantial increase in noise of 12 dBA or more. 20 sound barriers analyzed; 3 meet the reasonable and feasible criteria.	Of the 358 modeled receptors, 69 approach or exceed the 67 dBA L_{eq} NAC and 151 would experience a substantial increase in noise of 12 dBA or more. 23 sound barriers analyzed; 4 meet the reasonable and feasible criteria.	Of the 355 modeled receptors, 66 approach or exceed the 67 dBA L_{eq} NAC and 150 would experience a substantial increase in noise of 12 dBA or more. 23 sound barriers analyzed; 4 meet the reasonable and feasible criteria.
Energy	No impact	No impact	The MCP project would result in a nominal (maximum of 0.36 percent) long-term increase in regional energy consumption.		
Natural Communities	No impact	Less impact than MCP project	17.4 acres of impacts to riparian/riverine areas/habitat.	***16.0 acres of impacts to riparian/riverine areas/ habitat.***	16.4 acres of impacts to riparian/riverine areas/habitat.
			29.0 acres of impacts to San Jacinto River alkali communities		
			93.6 acres of impacts to Riversidean upland sage scrub.	90.5 acres of impacts to Riversidean upland sage scrub.	***88.1 acres of impacts to Riversidean upland sage scrub.***
			Would impact 195.0 acres of Western Riverside County MSHCP Criteria Areas	Would impact 195.1 acres of Western Riverside County MSHCP Criteria Areas	Would impact 195.0 acres of Western Riverside County MSHCP Criteria Areas
Wetlands and other Waters	No impact	Less impact than MCP project.	7.19 acres of permanent impacts to USACE jurisdictional areas (2.18 acres of wetlands; 5.01 acres of nonwetland waters)	7.29 acres of permanent impacts to USACE jurisdictional areas (2.11 acres of wetlands; 5.18 acres of nonwetland waters)	***7.17 acres of permanent impacts to USACE jurisdictional areas (2.15 acres of wetlands; 5.03 acres of nonwetland waters)***
			6.06 acres of temporary impacts to USACE jurisdictional areas (3.78 acres of wetlands; 2.28 acres of nonwetland waters)	***4.53 acres of temporary impacts to USACE jurisdictional areas (3.11 acres of wetlands; 1.41 acres of nonwetland waters)***	5.26 acres of temporary impacts to USACE jurisdictional areas (3.63 acres of wetlands; 1.63 acres of nonwetland waters)
			13.3 total acres of aquatic resources (permanent and temporary impacts)	***11.8 total acres of aquatic resources (permanent and temporary impacts)***	12.4 total acres of aquatic resources (permanent and temporary impacts)
			9.23 acres of permanent impacts to CDFW jurisdictional areas	9.19 acres of permanent impacts to CDFW jurisdictional areas	***9.00 total acres of permanent impacts to CDFW jurisdictional areas***
			5.48 acres of temporary impacts to CDFW jurisdictional areas	***3.96 acres of temporary impacts to CDFW jurisdictional areas***	4.69 total acres of temporary impacts to CDFW jurisdictional areas
Plant Species	No impact	Less impact than the MCP project	2.7 acres of direct impacts to areas of long-term conservation value for smooth tarplant 2.0 acres of direct impacts to areas of long-term conservation value for Coulter's goldfields		
Animal Species	No impact	Less impact than the MCP project	44.1 acres of direct impacts to Los Angeles pocket mouse occupied habitat suitable for long-term conservation 3.1 acres of direct impacts to burrowing owl breeding/foraging/nesting habitat The project will directly impact existing bridges and larger culverts that may provide maternity roosts and foraging roosts for bat species.		

Table 4.8.1 Summary of Potential Impacts

	No Build Alternative 1A	No Build Alternative 1B	Alternative 4 Modified	Alternative 5 Modified	Alternative 9 Modified
Threatened and Endangered Species	No impact	Less impact than the MCP project	0.36 acre of occupied San Jacinto valley crownscale habitat 1.09 acres of occupied spreading navarretia habitat and final critical habitat with primary constituent elements 3.66 acres of least Bell's vireo occupied habitat 4.25 acres of occupied San Bernardino kangaroo rat (SBKR) habitat 2.9 acres of final SBKR critical habitat		
Invasive Species	No impact	Less impact than the MCP project	The construction of the MCP project may spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that its seed is spread along the highway. During the operation of the MCP, vehicles using the facility may also spread invasive species; however, these impacts would be minimal because areas adjacent to the facility will be landscaped with native species that should outcompete the invasive species.		
Cumulative Impacts	No impact	Less impact than the MCP project	The MCP project, when combined with other cumulative projects, would contribute to impacts related to a cumulative loss of farmlands; visual/aesthetics; cultural and paleontological resources; natural communities; wetlands and other waters; and plant, animal, and threatened and endangered species.		

Bold Italics indicate the Build Alternative that performs the best among the three Build Alternatives in each impact category.
CDFW = California Department of Fish and Wildlife
MCP = Mid County Parkway
MSHCP = Multiple Species Habitat Conservation Plan
SCAQMD = South Coast Air Quality Management District
USACE = United States Army Corps of Engineers

almost three times longer under Alternative 1A (approximately 44 minutes) than with the MCP project (approximately 14-16 minutes).

2. Alternative 1A would not provide increased capacity to support the forecasted travel demand for the 2040 design year. As discussed in Chapter 1 and Section 3.6, Ramona Expressway would operate at LOS F under Alternative 1A.
3. Alternative 1A would not provide a limited access freeway. As discussed in Chapter 2, Alternative 1A would not limit access to Ramona Expressway, which would impede traffic flow.
4. Alternative 1A would not provide roadway geometrics to meet state highway design standards. As discussed in Chapter 2, Alternative 1A would not meet state highway design standards.
5. Alternative 1A would not accommodate Surface Transportation Assistance Act (STAA) National Network trucks. As discussed in Chapter 2, Alternative 1A would not meet state highway design standards and, therefore, would not be able to accommodate STAA National Network trucks.
6. While Alternative 1A would not be incompatible with a future multimodal transportation system, it would not provide the improved mobility that will enable commuters to better access the future Perris Valley Line commuter rail project and the Perris Multimodal Facility.

While Alternative 1A would not meet the project objectives, it would also not result in most of the significant adverse environmental impacts discussed in Chapter 3 and Section 4.2 above. However, as documented in Section 3.6 of this Recirculated Draft EIR/Supplemental Draft EIS, Alternative 1A would result in traffic LOS that does not meet local or State standards.

As shown in Table 4.8.1, No Build Alternative B performs better for the impact categories than the Build Alternatives but not as well as No Build Alternative A. However, similar to No Build Alternative A, No Build Alternative B does not meet the defined project objectives.

Section 15126.6(e)(2) of the CEQA Guidelines requires that, when the "no project" alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

The three Build Alternatives were evaluated to assess which of those three alternatives is environmentally superior. As shown in Table 4.8.1, Alternatives 4

Modified, 5 Modified, and 9 Modified perform the same or very close to the same for the following impact categories:

- Land use: consistency with federal, state, regional, and local plans
- Growth: potential for growth-inducing effects in areas not analyzed as part of the CETAP Corridor
- Community impacts: permanent physical changes in community character
- Utilities and emergency services: impacts on providers and relocation of utilities
- Traffic: traffic volumes, temporary impacts during construction, and impacts to trails
- Visual and aesthetics: short- and long-term visual impacts
- Cultural resources: impacts on archeological resources
- Hydrology and floodplains: encroachments at the San Jacinto River and the Perris Valley Storm Drain
- Water quality: erosion effects of steep slopes and decreases in annual loading
- Geology, soil, seismic, topography: alteration of landforms, disturbance of soils, soil compaction, erosion, and seismic effects
- Hazardous waste and materials: hazardous materials spills and transport of hazardous substances
- Air quality: short- and long-term emissions
- Energy: nominal increase in energy consumption in the long term
- Natural communities: impacts to San Jacinto River plant communities
- Plant species: impacts to areas of conservation value for smooth tarplant and Coulter's goldfields
- Animal species: impacts to the Los Angeles pocket mouse, burrowing owl, and bats
- Threatened and endangered species: impacts to occupied habitat for San Jacinto Valley crownscale, spreading navarretia, least Bell's vireo, and San Bernardino kangaroo rat.
- Invasive species: potential to spread invasive species
- Cumulative impacts: contributions to cumulative impacts to farmlands; visual/aesthetics; cultural and paleontological resources; natural communities; wetlands and other waters; and plant, animal, and threatened and endangered species
- Climate change: small increases in carbon dioxide

As shown in Table 4.8.1, the impacts of the three MCP Build Alternatives differ for the following impact categories. Bold italics in Table 4.8.1 identify the build alternative that performs the best among the three build alternatives in each impact category.

- Land use: existing and future land uses
- Land use: parks and recreation - impacts at Liberty Park
- Farmlands and timberlands: permanent use of designated farmlands
- Community impacts: community disruption, community cohesion, and schools
- Community impacts: property acquisition and displacements
- Community impacts: property and sales tax losses
- Community impacts: impacts on environmental justice populations
- Traffic: travel times
- Water quality: amounts of disturbed soils and numbers of stream crossings
- Paleontology: impacts on Low and High Sensitivity Areas
- Hazardous Waste and Materials: numbers of sites
- Noise: impacted receptors and reasonable and feasible sound barriers
- Natural communities: impacts to riparian/riverine areas and habitats, Riversidean upland sage scrub, and Western Riverside County MSHCP Criteria Area
- Wetlands and other waters: impacts to USACE and CDFW jurisdictional areas, and other aquatic resources

The performance of the MCP Build Alternatives for these impact categories is discussed in the following sections.

- **Land Use – Existing and Future Land Uses.** As shown in Table 4.8.1, Alternative 9 Modified would result in the lowest acreage of land use impacts because it would require the least amount of right of way, at 1,332.4 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest right of way needs at 1,397.0 ac, which is only 64.6 acres more than for Alternative 9 Modified.
- **Land Use – Parks and Recreation.** As shown in Table 4.8.1, none of the three Build Alternatives would result in permanent impacts to Liberty Park. Alternative 4 Modified would result in no temporary impacts to the park. Alternative 5 Modified, Alternative 9 Modified, and the preferred alternative (Alternative 9 Modified SJBR DV) would result in TCEs at Liberty Park but those impacts would be temporary and would not result in permanent changes in Liberty Park.

As a result, in the long term, there is no substantial difference in impacts at Liberty Park under the three Build Alternatives.

- **Farmlands and Timberlands.** As show in Table 4.8.1, Alternative 9 Modified would result in the lowest acreage of impacts to agricultural lands, at a total of 1,041.8 acres of designated farmlands. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact on designated agricultural lands at 1,107.3 ac, which is only 65.5 acres more than for Alternative 9 Modified.
- **Community Impacts – Community Disruption, Community Cohesion, and Schools.** As shown in Table 4.8.1, all three Build Alternatives would result in the removal of existing land uses. Alternative 5 Modified is potentially the most disruptive because it would affect several large intermodal distribution centers. Alternative 9 Modified would bisect a residential area that would affect the cohesion of that community. Alternative 4 Modified would result in the least community disruption because it largely is adjacent to the Perris Valley Storm Drain and is on the alignment of the existing Ramona Expressway in the general area disrupted by Alternatives 5 and 9 Modified. As shown in Table 4.8.1, Alternative 9 Modified would not result in impacts to schools and Alternatives 4 and 5 Modified would both result in direct permanent impacts at Val Verde High School and the Val Verde Unified School District Administrative and Facilities Operations Building.
- **Community Impacts – Property Acquisition and Displacements.** The property acquisitions and displacements of the Build Alternatives are shown in Table 4.8.1. As shown, Alternative 4 Modified would result in the lowest number of nonresidential property acquisitions and displacements at 91, followed by Alternative 9 Modified at 103 and Alternative 5 Modified at 159. Alternative 5 Modified would result in the lowest number of residential property acquisitions and displacements at 36, followed by Alternative 4 Modified at 48, and Alternative 9 Modified at 102. Alternative 9 Modified would result in the lowest numbers of displaced businesses (37) and displaced employees (188), followed by Alternative 4 Modified (68 and 350, respectively) and Alternative 5 Modified (90 and 1,129, respectively). Alternative 5 Modified would result in the lowest number of displaced residents at 373, followed by Alternative 4 Modified at 426, and Alternative 9 Modified at 659.
- **Community Impacts – Property and Sales Tax Losses.** As shown in Table 4.8.1, Alternative 4 Modified would result in the lowest loss in property taxes with both Alternatives 5 Modified and 9 Modified resulting in substantially

greater losses in property taxes. Alternative 9 Modified would result in the lowest loss in sales taxes with both Alternatives 5 Modified and 9 Modified resulting in substantially greater losses in sales taxes.

- **Community Impacts – Environmental Justice Populations.** As shown in Table 4.8.1, Alternative 4 Modified would result in the fewest physical effects on low-income and minority populations. Alternatives 5 Modified and 9 Modified would each impact low-income and minority populations, as a result of the acquisition and displacement of nonresidential and residential uses, respectively. FHWA has made the determination that Alternative 4 Modified and Alternative 9 Modified would not have disproportionate impacts to environmental justice populations, while Alternative 5 Modified would have disproportionate impacts to environmental justice populations because of that Alternative's displacement of major employers (large intermodal warehouses) that may be difficult to relocate within the MCP study area.
- **Traffic – Travel Times.** As shown in Table 4.8.1, Alternative 9 Modified would result in the best travel time on the MCP between I-215 and SR-79, at 14.2 minutes, compared to 14.8 minutes for Alternative 5 Modified and 15.9 minutes for Alternative 4 Modified.
- **Water Quality.** Disturbed soils, stream crossings. As shown in Table 4.8.1, Alternative 9 Modified would result in the lowest amount of disturbed soil at 1,091 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the largest amount of disturbed soil, at 1,153 ac, which is only 62 acres more than for Alternative 9 Modified.

  Alternative 9 Modified would result in the lowest amount of new pavement at 479.5 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the largest amount of disturbed soil, at 525 ac, which is only 46 acres more than for Alternative 9 Modified.

  Alternative 5 Modified would result in 11 stream crossings, two less than under Alternatives 4 Modified and 9 Modified.

- **Paleontology.** As shown in Table 4.8.1, Alternative 9 Modified would result in the lowest total acreage of impact to Low and High Sensitivity Areas, at 1,332 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified impacting greatest amount of Low and High Sensitivity Areas at total of 1,396 ac, which is only 64 acres more than for Alternative 9 Modified.

- **Hazardous Waste and Materials Sites.** Alternative 9 Modified has the lowest number of hazardous materials sites within 0.25 mi, at 95. However, the differences among the alternatives are minimal with Alternative 4 Modified having the greatest number of sites within 0.25 mi, 103, which is only 8 sites more than Alternative 9 Modified.
- **Noise (Impacted receptors and reasonable and feasible sound barriers).** As shown in Table 4.8.1, the numbers of modeled receptors, receptors approaching or exceeding the 67 dBA L_{eq} NAC, receptors experiencing noise increases of 12 dB or more, sound barriers analyzed, and sound barriers determined to be reasonable and feasible are all very similar among the three Build Alternatives.
- **Natural Communities**. The potential effects of the Build Alternatives on natural communities are shown in Table 4.8.1. As shown, Alternative 5 Modified would result in the lowest total acreage of impact to riparian/riverine areas/habitat, at 16.0 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 17.4 ac, which is only 1.4 acres more than for Alternative 5 Modified.

  Alternative 9 Modified would result in the lowest total acreage of impact to Riversidean upland sage scrub, at 88.1 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 93.6 ac, which is only 5.5 acres more than for Alternative 9 Modified.
- **Wetlands and Other Waters.** The potential effects of the Build Alternatives on jurisdictional waters and other aquatic resources are summarized in Table 4.8.1. As shown, Alternative 9 Modified would result in the lowest total acreage of permanent impacts to USACE jurisdictional waters, at 7.17 ac. However, the differences among the three alternatives are minimal, with Alternative 5 Modified having the greatest impact at 7.29 ac, which is only 0.12 acre more than for Alternative 9 Modified. As shown, Alternative 5 Modified would result in the lowest total acreage of temporary impacts to USACE jurisdictional waters, at 4.53 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 6.06 ac, which is only 1.53 acres more than for Alternative 5 Modified.

  Alternative 5 Modified would result in the lowest total acreage of permanent and temporary impacts to other aquatic resources, at 11.8 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 13.3 ac, which is only 1.5 acres more than for Alternative 5 Modified.

Alternative 9 Modified would result in the lowest total acreage of permanent impacts to CDFW jurisdictional waters, at 9.00 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 9.23 ac, which is only 0.23 acre more than for Alternative 9 Modified. As shown, Alternative 5 Modified would result in the lowest total acreage of temporary impacts to CDFW jurisdictional waters, at 3.96 ac. However, the differences among the three alternatives are minimal, with Alternative 4 Modified having the greatest impact at 5.48 ac, which is only 1.52 acres more than for Alternative 5 Modified.

In summary, no MCP project is clearly environmentally superior to the other two alternatives. Each is superior in specific categories as shown in Table 4.8.2 and as summarized below. As shown in Table 4.8.2, Alternative 4 Modified is environmentally superior for the following potential impacts:

- Community disruption and cohesion
- Property tax revenue losses
- Impacts on environmental justice populations

Alternative 5 Modified is environmentally superior for the following potential impacts:

- Number of stream crossings
- Impacts to riparian/riverine areas/habitat
- Temporary impacts to USACE and CDFW jurisdictional area
- Permanent and temporary impacts to other aquatic resources

Alternative 9 Modified is environmentally superior for the following potential impacts:

- Impacts on existing and future land uses
- Impacts on designated farmlands
- Impacts to schools
- Sales tax losses
- Travel time savings
- Amounts of soil disturbed and new pavement
- Paleontology
- Number of hazardous sites
- Impacts to Riversidean upland sage scrub
- Permanent impacts to USACE and CDFW jurisdictional areas

Table 4.8.2 Environmental Superiority by Impact Category

Potential Impact	Which MCP Alternative is Environmentally Superior for the Impact Category
Existing and Future Land Uses	Alternative 9 Modified
Consistency with Federal, State, Regional, and Local Plans	No build alternative is superior to the other build alternatives
Parks and Recreation Facilities	No build alternative is superior to the other build alternatives in the long term
Growth	No build alternative is superior to the other build alternatives
Farmlands	Alternative 9 Modified
Community Impacts: Community Character and Cohesion	Alternative 4 Modified related to community disruption and cohesion Alternative 9 Modified related to schools
Community Impacts: Property Acquisitions and Displacements	No build alternative is superior to the other build alternatives related to property acquisitions and displacements Alternative 4 Modified related to property tax revenue losses Alternative 9 Modified related to sales tax losses
Community Impacts: Environmental Justice	Alternative 4 Modified
Utilities and Emergency Services	No build alternative is superior to the other build alternatives
Travel Times	Alternative 9 Modified
Visual and Aesthetics	No build alternative is superior to the other build alternatives
Cultural Resources	No build alternative is superior to the other build alternatives
Hydrology and Floodplain	No build alternative is superior to the other build alternatives
Water Quality and Storm Water Runoff	Alternative 9 related to the amounts of disturbed soil and new pavement Alternative 5 Modified related to the number of stream crossings
Geology, Soil, Seismic, Topography	No build alternative is superior to the other build alternatives
Paleontology	Alternative 9 Modified
Hazardous Sites	Alternative 9 Modified
Air Quality	No build alternative is superior to the other build alternatives
Noise	No build alternative is superior to the other build alternatives
Energy	No build alternative is superior to the other build alternatives
Natural Communities	Alternative 5 Modified for impacts to riparian/riverine areas/habitat Alternative 9 Modified for impacts to Riversidean upland sage scrub
Wetlands and other Waters	Alternative 9 Modified related to permanent impacts to USACE and CDFW jurisdictional areas Alternative 5 Modified related to temporary impacts to USACE and CDFW jurisdictional areas, and permanent and temporary impacts to other aquatic resources

Table 4.8.2 Environmental Superiority by Impact Category

Potential Impact	Which MCP Alternative is Environmentally Superior for the Impact Category
Plant Species	No build alternative is superior to the other build alternatives
Animal Species	No build alternative is superior to the other build alternatives
Threatened and Endangered Species	No build alternative is superior to the other build alternatives
Invasive Species	No build alternative is superior to the other build alternatives
Cumulative Impacts	No build alternative is superior to the other build alternatives
Climate Change	No build alternative is superior to the other build alternatives

Based on the impacts as summarized in Table 4.8.1 and the assessment of environmentally superior by impact category as shown in Table 4.8.2 and summarized above, Alternative 9 Modified is the environmentally superior alternative.